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Vol. 5

Vol. 5

MEDICO-CHIRURGICAL REVIEW.

THE

MEDICO-CHIRURGICAL REVIEW.

NEW SERIES.

VOLUME ONE.

[BEING VOL. V. OF ANALYTICAL SERIES.]

CONDUCTED BY

ASSOCIATED PHYSICIANS AND SURGEONS;

AND SUPERINTENDED BY

JAMES JOHNSON, M.D.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON,
AND PHYSICIAN EXTRAORDINARY TO HIS ROYAL HIGHNESS THE DUKE
OF CLARENCE.

Nec tibi quid liceat sed quid fecisse decebit
Occurrat mentemque domat respectus honesti. CLAUD.

LONDON:—PUBLISHED.

NEW-YORK:

REPUBLISHED BY J. V. SEAMAN, BROADWAY.
J. & J. Harper, Printers.

1825.

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☞ In this Number, our readers will perceive an elarged page, by means of which, the quantum of matter in this and every succeeding Number of the Journal, has been, and will be considerably augmented.

PREFACE.

AT the commencement of a New Series, some perfatory observations will naturally be expected. The encouragement of the Public might seem to demand our sincere thanks—but we doubt whether the public care much about them. They look for *doings* rather than *sayings*. We apprehend that, if we came before them quarterly with a laudatory preface and a lean table of contents, we should soon preach to the "viewless winds." Under this impression, we have thought it proper to express our gratitude in substantial facts, rather than in specious promises. We choose to address the SENSE, rather than the PASSIONS of our readers—their judgment rather than their imaginations—their interest rather than their amusement. Whether this plan, which we have uniformly endeavour to pursue since the commencement of our labours, has been hitherto, or is likely to be in future, crowned with success, we have no inclination at present, to inquire. The facts of the case are best known to those most interested in the question: and we leave it to be settled by our friends and our enemies in whatever way it may be most agreeable to them.

If it be asked, why we have begun a New Series? the answer is, that the back numbers are out of print, and few people like to begin with a broken set of a periodical journal. But why not reprint them? Because such a re-publication would require much time, much trouble, and great expense. And, after all, many, who would wish to commence with a New Series, would not choose to go to the expense of four years' back numbers.* By the present plan, we occasion no inconvenience to the holders of the former series, since the numbers and volumes are still continued; while we afford a great facility to those who subscribe from the present time.

---

* Those who do, will, we hope, soon be accommodated by sets of the work (now reprinting in America) and ordered from thence.

It has been represented to us, that there is great danger in closing a series. Old friends may wish to change—and at such a period they have a good opportunity. Be it so. God forbid that we should throw any obstacle in the way of those who wish to quit our company. They are now released from all restraints or obligations, and may depart in peace.

But, as we run the risk of closing one series, we may fairly claim the advantage of opening another. Many hundred young practitioners now annually start in the career of practice. The present may be characterized as the reading age. No practitioner henceforth can be without a periodical publication in medical science, and we stand before the Public among the candidates for a share of their patronage.

The scope and tendency of this Review are now well known. The plan was, at first considered somewhat utopian. Time has proved that it is perfectly practicable. While unencumbered with original communications, our Periscope enables us to range through the whole galaxy, and cull out the choice morsels. But it will be said, we have them at second hand. So much the better. If these articles will not bear keeping for three or even six months, we had rather not ship them among our cargo. There is, in fact, great variety in these commodities. Some keep a week, and no more. The moment they see the light they perish. Others keep a month, and then languish. If they stand three months, they are worth trial, and we import the best samples from abroad to mix with the best specimens which we can procure at home.

So much for our Periscope. Most of the above observations will apply, also, to the main department of our work, the *Review of Books*. We venture to affirm that we have carried on this department in a manner somewhat different from any that has ever beed adopted before, by periodical writers. We have aimed at the very difficult task of exhibiting a comprehensive and connected view, combined with a minute and particular detail of the works which we have annalyzed. This is a task which it is not so

MEDICO-CHIRURGICAL REVIEW.

of applause. *These* we shall never, under any circumstance whatever, condescend to notice, content with the suffrages of the good from abroad—and with the "MENS CONSCIA RECTI" at home.

Nota. The first volume of Dr. Bostock's vuluable Elementary System of Physiology came, after the Bibliographical Record was closed. It is to be particularly rememberod, that all Notices, Intelligence, Books for Review, &c. will be too late for acknowlgment after the 16th of the month preceding publication.

THE
Medico-Chirurgical Review.

Vol. I.] Analytical Series. [No. 17.

"Nec tibi quid liceat sed quid fecisse decebit
"Occurrat, mentemque domat respectus honesti."

Vol. I.] JUNE 1, 1824. [No. I.

NEW SERIES.

I.

DISEASES OF THE SPINAL MARROW.

De la Moelle Epiniere *et de ses Maladies; Ouvrage couronné par la Societé Royal de Medecine de Marseilles, dans sa Séance Publique du* 23 *Octobre*, 1823. Par C. P. Ollivier, M. D. &c. &c. Octavo, pp. 404, two lythogarphic Plates. Paris, 1824.

It has been acknowledged for several years past, that affections of the spinal marrow and its membranes are much more common than was formerly suspected—and that these affections often produce disturbance of function in various important organs, in a very occult manner with respect to the original seat of the disease. The difficulty of examining the spine, in our *post mortem* researches, has greatly contributed to keep its pathology obscured—for, except in hospital practice, it is almost impossible to have a satisfactory view of this important portion of the nervous system—and even in hospitals, we fear the time and labour required for spinal dissections, operate powerfully in preventing the toilsome investigation. Even the simple anatomy of the sp
is far less familiar to the eye of the practitioner, than
other parts of the body. He sees the spine two or
demonstrated or lectured on, during his studies; but
in the common routine of practice, he loses all intim
ance with the part, and becomes incapable of

less obtrusive deviations from its natural structure, should he, by accident, take the trouble of laying open the vertebral canal in search of the seat of diseases. On all these accounts, we must certainly consider ourselves greatly indebted to any individual who imposes on himself the task of investigating the pathology of the spine, even although the first attempts should be imperfect and unsatisfactory.

Dr. Ollivier's work has been crowned with the prize by the Royal Society of Medicine of Marseilles, and thus brings a respectable passport in its title-page. The body of the work evinces talent, labour, zeal, and considerable research—we, therefore, deem it worthy of a very full analysis in our pages.

The volume is divided into three parts; viz. the Anatomy, Physiology, and Pathology of the Spine. The anatomy we must pass over entirely, as that must be learnt in the dissecting-room; and the physiology of the organ we must be very brief with, in order that we may be able to dedicate more space to its diseases.

CAP. I.—Functions of the Medulla Spinalis.

Hippocrates observed, that lesions of the spinal chord caused paralysis of the parts situated below the point of lesion, and this was confirmed by the experiments of Galen. It is now well known, that the spinal marrow exercises a direct influence on the production of sensation and motion in the trunk and members. It is, therefore, the *agent* of voluntary action, though, in this respect, it is dependant on the brain, notwithstanding some facts which seem to indicate its independence. "These facts only prove that the influence of the brain on certain actions of life, is so much the less marked in proportion as the animal exhibits a less perfect organization." But the influence of the spinal marrow is not confined to the production of sensation and muscular motion—it is extended to certain vital functions, for example, circulation and respiration. Although Haller attributed the action of the heart to its own innate irritability, he afterwards confessed, that the spinal marrow exercised a special influence on that action; a strange contradiction in a man like Haller! Experiments, however, have proved that the action of the heart is not entirely and immediately dependent on the spinal marrow, as that action has continued when the spinal marrow was removed, and fœtuses have been born without a spinal marrow at all. Nevertheless, the fact is equally certain, that where and while the spinal marrow does exist, it influences decidedly the action of the heart. This is proved beyond all doubt by innumerable pathological facts.

The influence of this organ on respiration is much more direct and obvious—in fact, this function is entirely under the influence of the spinal marrow, at least, in mammiferous animals, who die suffocated as soon as the par vagum (which originates in the upper portion of spinal marrow) is cut. "In respect then to respiration and circulation, we may consider the spinal marrow as an isolated centre of vitality, independant of the brain." 65. Many authors have, also, considered the spinal marrow as influencing several other functions of the interior life, through the medium of the great sympathetic nerve, which has, according to Legallois, its roots in the spinal marrow. This idea is strengthened by the observations of Weber on the great sympathetic. He remarked, that the development of this nerve was always in proportion to that of the spinal marrow, in the various classes of animals which he has examined. In fine, our author thinks it highly probable, that the spinal marrow, directly or indirectly, presides over the whole of the interior functions of the thorax and abdomen, seeing that the par vagum and great sympathetic have their sources in this prolongation of the brain. It is well known, that the experiments of our ingenious countryman, Mr. Brodie, led him to conclude that the power of generating animal heat resided in the brain. About four years ago, M. Chossat repeated Mr. Brodie's experiments, and the results led him to conclude, that this calorific power was shared by the spinal marrow. In these experiments, the section of the medulla spinalis at the occipital foramen, or, indeed, between any of the cervical vertebræ, effected an equal depression of temperature, under artificial respiration, as destruction of the brain itself.

In this place, Dr. Ollivier alludes to the recent experiments of M. Fleurens on the nervous system, of which we took some notice in the 15th Number of this Journal, page 705-6. That gentleman and some others, especially Fodera, Magendie, and Rolando, have ascertained, or think they have ascertained, by experiments on animals, that the property of nervous sensibility, or, as a cotemporary terms it, *impressibility*, is limited to the corpora quadrigemina, medulla oblongata, spinal cord and nerves—that the integrity of the optic thalami is not essential to the contractility of the iris—that the senses of sight and sound reside in the cerebral lobes—and that *there* all other sensations acquire distinctness and durability—that the spinal cord combines the muscular contractions so as to produce motion in the joints---and, finally, that the cerebellum regulates these movements, and unites them so as to constitute the actions of standing and locomotion.

On all sides it is admitted, that in the spinal marrow are the foci of feeling and motion; and the experiments of Bell and Magendie lead us to believe, that in the *posterior* roots of the spinal nerves resides the power of sensation, or, at least, of transmitting impressions to the sensorium; while the *anterior* roots preside over voluntary motion. Such is the succinct sketch which we have traced of the physiology of the spinal cord, and we believe it comprehends most of what is known on the subject.

CAP. II.—Diseases of the Spinal Marrow.

It is acknowledged that diseases of this part of our frame are much less common than those of most other parts of the body—infinitely less numerous than those of the brain, for example—and this is *one cause* why they are less known than encephalic affections. Another reason is, the obscurity of their symptoms—and a third, the difficulty of *post mortem* examinations. In tracing the diseases of the spinal marrow, it is proper to begin with original malformations—and here our author acknowledges his obligations to the lectures of M. Beclard on monstrosities.

§ 1. *Absence of the Spinal Marrow.*—No examples are on record of the total want of a spinal marrow, the other parts of the nervous system being entire. When it is wanting the brain is always wanting, but not the converse of this; for there have been numerous acephalous monsters where the spinal marrow was entire. There are many instances recorded of want of both brain and spinal marrow; but only one (Philosophical Transactions, 1793) where the whole nervous system was deficient. It is curious that some of these monsters, without either brain or spinal marrow, have been born alive, and lived many hours, taking nourishment, and showing signs of sensibility. In the amyelencephalic monsters, (those defective in brain and spinal marrow both) the place of these organs is supplied by membranous pouches or canals filled with a yellowish and viscid liquid, which is generally discharged by rupture of these pouches or canals during parturition. The origins of the nerves present various appearances—sometimes a little eminence or tubercle opposite the intervertebral foramina—sometimes only a few filaments rising from the membrane lining the theca vertebralis. It may be remarked here, that there is not a real, but only an apparent want of brain and spinal marrow in these instances of monstrosity. These parts, in the first rudiments of the embryo, are in a liquid state, and continue so, having never taken on the regular process of organization. It is this liquid which supplies the place and performs the functions of the brain and spinal marrow, till the membranes enclosing it burst, before or after parturition, when the fœtus or infant dies.

§ 2. *Atelomyelia,*[*] *or Imperfection of the Spinal Marrow.*—There are several malformations or imperfect organizations of the spinal marrow, as deformities about the upper portion, when the brain is wanting—a division of the medulla spinalis into two separate parts, by a greater or less interval—bifurcations—the existence of a canal in its centre—congenital dropsy. We shall only notice the last of these vices of organization.

Congenital Hydrorachis.—This is characterized by one or more tumours, in one or more points of the spine. There are but a very few instances on record where these tumours became developed some years after birth, and consecutively to dropsy of the theca vertebralis. One of the most remarkable is related by Morgagni. The rarity of this phenomenon is easily accounted for, when we consider that the formation of the external tumour generally depends on spina bifida, and that any opening in the bony structure can only take place at a very early period of its ossification. These tumours are of various forms and sizes—sometimes, indeed generally, very circumscribed—but, at others, occupying a great part, or even the whole of the spinal column. Sometimes the tumour is transparent; but more commonly opake, and the colour of the integuments unchanged. The most frequent site of the tumour is in the lumbar region. Occasionally, though more rarely, the tumour has been seen in the region of the sacrum, of which an instance is cited from Vrolik. When there are several tumours, if one be pressed it causes a swelling of the others. If there be hydrocephalus, pressure on the head will distend the hydrorachis—and pressure on this last will, at any time, cause fainting and all the phenomena attendant on cerebral compression, by forcing the fluid up on the brain. The envelopes of these tumours are composed of skin, (which is sometimes nearly transparent, and at others entirely wanting) dura mater, tunica arachnoidea, and pia mater. There is, of course, in all cases of this kind, an imperfection in the bony canal. The fluid of hydrorachis is analogous to that of other dropsies—especially of hydrocephalus, with which it is often complicated. The quantity is various, and generally augments with age if the patient lives. In hydrorachis, the spinal marrow presents various appearances of malformation: but, sometimes, little or no alteration from the natural structure. There are, also, very often vices of organization in other parts of the body, as transpositions of the viscera, extroversions of the bladder, imperforation of the rectum, &c. This disease, however, does not appear to have any influence on the fœtal life; but, after birth, it generally causes death, at a longer or shorter period from the commencement of its separate existence.

---

[*] *α* privative, τελος perfection, and μυελος medulla.

In general, the higher up and larger the tumour, the sooner it proves fatal. When life is prolonged, we usually find the children thus affected feeble, languid, and emaciated—occasionally paralytic. There are, however, some curious exceptions, where boys and girls have grown up with the disease, and appeared to be well nurtured. In general the tumour augments gradually, sometimes bursting spontaneously, and causing death in the midst of convulsions. There has been one or two instances of cure. Bonn relates the case of a child who lived ten, and Warner the case of a young man who lived twenty years. Camper speaks of another case where the age of thirty years was attained. It is said, that there is now in London a woman 29 years of age, with hydrorachis. In her, the tumour has attained the size of a man's head, and from its surface there is a slight oozing of liquid. She enjoys good health.

Treatment. Death has generally been the result of puncturing the tumour. There are, however, a few exceptions to the contrary. Sir Astley Cooper is well known to have been successful in one case.* Terris's case of cure was by spontaneous rupture of the tumour. In the greater number of those who have had a puncture made, inflammation spread up along the membranes, and destroyed life. Our author thinks that our curative efforts ought to be bounded to the attempt to procure absorption of the fluid, without making any strong pressure on the tumour. When the integuments are not very thin, he recommends the application of blisters, and the actual cautery in the vicinity of the tumour, together with frictions, baths, and, in some cases, gentle pressure cautiously applied. Where there is hydrocephalus, of course this disease is to be attended to particularly.

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* This eminent surgeon lays down two modes of treatment, one palliative, the other radical. The first consisits in treating the case as a hernia, and applying a truss to prevent its descent. The second mode is to procure adhesion of the sides of the sac, so as to close the opening from the spine, and stop the disease altogether. The first is attended with no risk, as the truss forms an artificial vetebra, when the natural one is defective. The truss must be continued through life. On the other hand, the cure by adhesion exposes the patient to much constitutional irritation; but, if successful, it leaves him without apprehension of the future return of the disease. The child cured by Sir Astley in this way, was a specimen of fine health. Our excellent author states, that there are many cases which do not admit of cure. These are as follows:—"If the tumour is connected with an unnatural enlargement of the head, hydrocephalus internus is conjoined with spina bifida, and the water will accumulate in the ventricles, if the tumour in the loins is attempted either to be palliated or radically cured." Again, "If the lower extremities are paralytic, or the fæces and urine are discharged involuntarily, there is no hope of relief." The radical cure consists in puncturing the tumour with a needle as often as the fluid accumulates.

Atrophy of the Spinal Marrow. There are but a very few cases on record of this disease. Bonetus relates two In one case, where the individual had been subject to convulsions for twelve years, he found the spinal marrow sensibly diminished in size, the vertebral canal containing at the same time a considerable quantity of serosity, by the pressure of which, he conceived, the med. spin. was atrophied. In the other instance there was also a serous effusion, and the patient had been paralytic. Morgagni has remarked, that he has sometimes found the spinal marrow wasted in cases of long-continued hemiplegia. Our author himself, in his researches on the dead body, has twice observed a considerable diminution of volume in the medulla spinalis. One was the case of an idiot, who died at the age of 20, in a complete state of marasmus, especially of the lower extremities, which were also greatly contracted, the legs on the thighs and the thighs on the trunk. There was much effusion into the cavity of the arachnoid of the spine, and the vessels were immensely gorged with blood. The spinal marrow was reduced to about one half of its natural size. There was nothing remarkable in the brain. Our author has observed, that in most aged persons there is a wasting. more or less considerable, of the spinal marrow, which phenomenon, he thinks, may, in part at least, account for the unsteady gait of old people.

Our readers are aware that M. Magendie, or rather M Rullier, has related the case of a gentleman who preserved sensation and motion in the lower extremities, although a portion of the spinal marrow was entirely disorganized and wasted away. The following case is of a similar nature. It was communicated to Dr. Ollivier by M. Van de Keere, *Interne à l' Hôpital des Enfans Malades.*

Case. Towards the close of 1820, a child about eight years of age, with all the symptoms of a scrofulous constitution, died in a state of marasmus. For a long time previously, it had laboured under caries of the spine, accompanied by continual and severe headach. Motion and sensation continued in the lower extremities till the last.

Dissection. On opening the spinal canal there was a want of continuity in the medulla spinalis, between the ninth dorsal and first lumbar vetebræ—that is, for a space of nearly four inches. In this space the spinal envelopes were flattened together, but not materially changed in structure. When laid open there was no trace of spinal marrow in this portion, it having been compressed and annihilated by an acute angle of the spine, formed by an approximation of the ninth dorsal to the first lumbar vetebræ, with an interruption of the vertebral canal.

"*Dans le point où existait la destruction de la moelle, le rachis formait un angle tres aigu resultant du rapprochement de la neuvième vertebre dorsale avec la première lombaire ; il y avait interruption de son canal.*" P. 145.

There was extensive caries and tubercular disorganization about this part of the spine. The lower extremities were greatly wasted.

§ 3. *Wounds and Contusions of the Spinal Marrow.* These wounds are generally punctures or rents. When the vertebral column is fractured or luxated, (which is almost invariably attended with fracture,*) the spinal marrow may, or rather must be injured. It must be very rare, from the nature of the parts, that the spinal marrow can be simply wounded without fracture or other serious injury of the osseous fabric. In contusions of the spinal marrow, where the pia mater is not ruptured, there is often nothing unnatural to be seen in the medulla itself—sometimes, however, we find a small clot of blood in its centre. In violent contusions of the spine we generally find the pia mater ruptured, and an effusion into the theca vertebralis. When the medulla is cut across by a ball or other substance, death is generally very quick, and in proportion as the accident is high up in the spine. A curious example, and a melancholy one too, is related by Petit. A little boy, of six or seven years of age, was lifted up by the head in play, while in the shop of a neighbour. A dislocation was the consequence, and he died on the spot! At this moment the father of the child came in, and, in the transport of his rage, struck the unintentional murderer of the child with a cleaver which he held in his hand. The cleaver penetrated between the first and second cervical vertebræ, cut the spinal marrow across, and thus, in a few minutes, two persons died by the same kind of accident!

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* The case related by Mr. Howship in the New Medical and Physical Journal for December 1812, does not, we imagine, form an unexceptionable exception to this. The man was a bricklayer, who fell from a high scaffold, and when conveyed to an hospital, it was ascertained "that he had suffered subluxation outwards of the eighth dorsal vetebra." The lower extremities were completely paralytic. There was protuberance of the bone, and after several unavailing efforts, "the bone, on a sudden, returned into its natural situation, with a noise audible to the bystanders." Retention of urine now came on, and in a fortnight incontinence of the same, with involuntary discharge of the fæces. The water was thick, bloody, and loaded with mucous and calculous matters. In the course of the third week there were some indications of returning sensation in the thighs, and he complained of tingling pains and pricking sensations. At the close of the third week mortification took place near the anus, and afterwards the penis sloughed. Vomitings now came on; his speech faltered; he grew comatose; had slight convulsions; and died at the period of five weeks from the accident.

As *post mortem* examination was not allowed, it cannot be said positively that this was a luxation or subluxation without fracture.

Our author relates a series of cases illustrating the comparative fatality and danger of wounds and contusions, according to their magnitude and the part of the spine injured. Thus Duverney relates a case, where a pistol ball fractured the second cervical vertebra, which was driven in on the spinal marrow. The man lived four days, most part of the time insensible, speechless, and paralytic. Morgagni, on the other hand, gives us a case where considerable injury must have been done to this organ without death ensuing. A young man was wounded by a stiletto in the upper part of the neck, near the origin of the spinal marrow. He fell down on the spot deprived of sense and motion, and in this state he was carried home. As he appeared to be very cold, the attendants imprudently applied a considerable degree of heat to the lower extremities without his feeling the applications. The consequence was, that deep and sloughing ulcers ensued. There was at first retention of urine, and also of fæces—but in a few days both came away involuntarily. About the eighteenth day he began to recover a little feeling in the left side of the body, which was slowly followed by the power of motion. In six months he was able to walk a few steps.

Two cases are related of injury about the fifth cervical vertebra. As it is proper that young practitioners should be acquainted with the phenomena presented, and results to be expected from injuries at different distances from the summit of the spinal column, we shall be rather more particular than may, at first sight, appear necessary.

Case. On the 27th of September, 1819, a stone-mason in Paris fell from a ladder, and in his descent the back part of his neck was struck violently against one of the steps. He was carried to the Hotel Dieu, with paralysis of the upper and lower extremities, insensibility and cold, ness of the skin, laborious respiration, slow pulse, sighing, feebleness of voice, difficulty of answering questions, respiration carried on entirely by the diaphragm. The patient was threatened with suffocation. He died on the 29th, and was most part of the time sensible. On dissection, the fifth cervical vetebra was found fractured, and a portion of it driven against the spinal marrow, which was compressed to one half its ordinary volume.*

The following case is interesting, particularly as affording a rare example of dislocation, without fracture of the spine. It was, however, in the cervical portion, where we believe it can alone take place.

Case. On the 10th of December, 1821, Peter Jalet, having carried a sack of flour on his head and shoulders up a flight of steps, threw the sack down in the granary; but in this last act, felt something crack in the lower part of his neck, accompanied by a sudden and acute pain. He instantly fell down in a state of paralysis, and in this condition was carried to the Hotel Dieu. Here the paralysis of the inferior extremities was found to be complete, that of the superior incomplete. There was a slight degree of sensibility of the skin. He said he felt a sense of formication in his limbs, and cutting pain in his shoulders. There was paralysis of the rectum and bladder. The respiration was entirely carried on by means of the diaphragm, the thoracic parietes being quite motionless—pulse frequent and strong—skin hot—mental faculties unaffected. Bled from the arm, and 30 leeches applied to the back of the neck. 11th. Same state. Bled again both locally and generally. In the night the dyspnœa became very urgent, with great fever and delirium. He died next morning of suffocation.

Dissection. In the head nothing particular was observable. In the spine was found rupture of the intervertebral ligament, which unites the sixth and seventh cervical vertebræ, together with some other of the minor ligaments. The body of the sixth vertebra was pushed more forward than that of the seventh—and in this place the substance of the spinal marrow was violently contused and disorganized, but its envelopes not ruptured. The lungs were gorged with black blood, and very heavy. The lining membrane of the bladder was red and inflamed. The other viscera sound.

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* Sometimes, where there is fracture of the spine, the medulla spinalis will be fatally injured, without the envelopes appearing at all affected. Dr. Gordon has related a case of this kind in the Edinburgh Medical and Surgical Journal, for October, 1817. The case was that of a chimney-sweeper, who fell down a chimney, and fractured the seventh cervical vertebra. The theca vertebralis and arachnoid opposite the fracture appeared quite natural—the pia mater exhibited a bluish tint. But the organization of the cord itself opposite the fracture was completely destroyed for the space of half an inch, being reduced to a pultaceous mass not much thicker than cream.

In this, as in the preceding case, death evidently was occasioned by the lesion of the respiratory function. When the accident to the spinal marrow is below the origins of the phrenic nerves, M. Dupuytren thinks that inflammation of the medulla is propagated upwards, and having reached the origins of the phrenic nerves, asphyxia ensues.

In the following case the spinal marrow was almost obliterated by a fracture of the spine at the eleventh dorsal vertebra, and yet life went on for several days. The patient was a mason, who fell from a stage, and struck his back against some scaffolding in his descent. He was carried to the Hotel Dieu in a state of paraphlegia, on the 25th of June, 1821. He was bled pretty freely. He presented the following symptoms:—lies on his back—features altered, and face covered with sweat—respiration free—pulse natural—no inclination to pass water or fæces, although the bladder was distended—loss of feeling and motion in the inferior extremities, except a sense of formication in the feet. 26th. Vomitings—pain in the epigastrium—pulse frequent. 27th. Vomitings have ceased, but in other respects he is the same. 28th. Ditto. 29th. The vomiting has returned, with increase of the epigastric pain.—blood in the urine when drawn off. 30th. Much vomiting—swelling and tension of the abdomen. 1st July. Died.

Dissection. The body of the eleventh dorsal vertebra was fractured and the vertebral canal almost obliterated at this part by a fragment of bone. The spinal marrow was, of course, greatly compressed, but its envelopes were not torn, though much ecchymosed. There was some phlogosis in the mucous membrane of the stomach and bowels; while the coats of the bladder were thickened and high inflamed.*

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* In the 20th volume of the Medical and Physical Journal is a case of injury of the spine related by Mr. J. Dorr of New-York. A man received a blow across the back by the fall of a tree, which partially dislocated his spine, between the first and second lumbar vetebræ, producing a considerable tumour, and obtuse angle of the spine, with an entire abolition of sensation and motion in the lower extremities. Our author says he reduced the bones to their places. Next day he found the bladder violently distended, and also retention of fæces. The water was obliged to be drawn off for eight days, when an involuntary discharge took place. The rectum continued paralytic ever afterwards. "For about three years past his urine has been discharged in the following ways, viz. about one fouth passes through a sinus, nearly in a lateral direction from the umbilicus on the right side—one-third through the urethra—and the remainder through the most depending part of the scrotum, through several openings." It was curious that the testicles were entirely obliterated. The lower extremities were greatly emaciated, but the upper part of the body was plump and firm. His digestive and intellectual functions were untouched.

It is curious that the interruption of nervous influence should give a tendency to inflammation in a part. It is certain that concussions, contusions, and fractures of the spine, almost invariably produce inflammation of the lining membrane of the bladder. The urinary secretion is also greatly deranged in these cases. Dupuytren has remarked, that in paraplegia, of all other diseases, the catheter, when left in the bladder, is soonest covered with a saline incrustation.*

The few cases which we have extracted from a great number collected by our industrious author, present the principal phenomena resulting from injuries by violence to the spine. It is needless to say that, in such cases, our prognosis must almost always be of the sombre cast; for few indeed are the recoveries after serious lesion of the spinal marrow; and, consequently, such rare exceptions are not to induce us to betray ourselves by expressing much hope of recovery in any case. At the same time we may be deceived in our estimate of the extent of lesion in the spinal marrow, and therefore, while we warn the friends of the great danger of the case, we should take the precaution of giving the patient every chance of recovery. The removal of pressure, where it exists, and the prevention or repression of inflammation, which is pretty certain to ensue, are almost the only means which surgery and medicine have in their power. We need not descant on these.

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* In the 25th volume of the Medical and Physical Journal Mr. Harrold has related an interesting case of fracture of the vertebræ of the spine. A man was at work in a chalk-pit when the vault fell in and buried him several feet under chalk and flints. When seen, there was evidently fracture of the last dorsal and first lumbar vertebræ, the back there forming a considerable angle, with complete paraplegia. He was placed in a fracture bed invented by Mr. Harrold. It was necessary to draw off his water daily, and after some time the urine was found to contain a good deal of offensive purulent matter. In a few weeks the power of voiding his water returned. In spite of all their care the integuments over the sacrum sloughed. In about six months the following report was made by Mr. Harrold. "His back is as straight and flexible, and apparently as strong as ever—for he can sit perfectly erect in a chair, and can stoop sufficiently, as he sits, to rub his feet on the ground." The spinous process of the fractured vertebra is still more prominent than the others. He retains and passes his urine as he pleases. "He has a stool every two or three days, and begins to be conscious of passing it. No feeling or power in the lower extremities—appetite and bodily health good." In a subsequent paper in the succeeding volume of the same journal, Mr. Harrold informs the profession that the sacrum proved to be diseased where the slough had been situated; the discharge became profuse, and he died hectic one year subsequent to the fracture. On dissection, it was found that the bodies of three or four vertebræ had been crushed and fractured, more or less, but all the fractures were firmly united by bone. A splinter had been driven in upon the medulla spinalis, its sheath burst open, and the medulla itself nearly destroyed.

§ 4. *Slow Compression.*—There are numerous circumstances, independent of external violence, which cause compression of the spinal marrow in a more or less slow manner. Thus sanguineous effusions into the theca vertebralis will produce compression very quickly, while curvatures and other affections of the osseous fabric will be very slow in operation. These last are the more common instances of slow compression. Exostosis of the vertebræ sometimes infringe on the vertebral canal, and strangle the spinal marrow by degrees. We shall here introduce a curious case.

Case. Nicolas Petipas, 60 years of age, a gilder, and ricketty, had never been able to walk without crutches, on account of an immense lateral curvature of the spine. He entered La Pitie in 1820, where he got cold in a damp ward. He began to complain of deep-seated and constant pain in the back of the head and along the cervical vertebræ. This pain gradually increased, and became very acute, when he attempted to eat or drink. The motions of the head became gradually impeded, and he felt a crackling kind of noise in his neck. This state continued six months; and he was then sent to the Bicetre, where the same symptoms continued. In the beginning of 1821, it was perceived that there was a prominent tumour in the nape of the neck, and that his head drooped forward. It was at this time that our author examined the patient. The whole neck was numbed, as were also the integuments of the upper part of the chest, the upper and lower extremities, the trunk as far as the umbilicus. In these parts was felt a stinging or tingling sensation, which could not be quieted. It was curious that there was a zone of about six inches in breadth quite round the chest, where the skin preserved its natural sensibility, and was free from the tingling sensation abovementioned. There was no affection of the digestive or urinary organs. In September 1822, he began to lose the power of his arms, which was soon followed by a similar affection of the lower limbs. The breathing was impeded, but not to a great extent. Gradually paralysis complete of the abovementiened parts became established, while the sensibility continued in the zone of integuments of the chest. Gangrenous eschars now formed on the sacrum, trochanters, &c. and this poor wretch's existence was terminated on the 31st of December, 1822.

Dissection. The substance of the brain was firm, and without any notable injection of the vessels. There was about half an ounce of turbid serum in the right lateral ventricle. No other alteration in the head. *Spine.*—The second cervical vertebra was enlarged and diseased, and caused the prominence in the nape of the neck. It encroached on the vertebral canal internally. The two first lumbar vertebræ were also diseased—their intervertebral cartilages destroyed in part, and about an ounce of serous effusion in the arachnoid spinal cavity at this place. Opposite to the diseased vertebræ, both cervical and lumbar, the dura mater was thickened and diseased, and adherent to the arachnoid. The pia mater, at this point of the spinal marrow, was red and adherent to the other envelopes. Anteriorly and below the corpora olivaria the pia mater was changed in colour, and its vessels greatly gorged with black blood. Opposite the second cervical vertebra there was a depression or indentation of the spinal marrow, about five lines in extent, and a line and a half in depth. The substance of the spinal marrow, in this place, was softened and pulpy. Abreast of the *sixth* cervical vertebra another softened portion of spinal marrow was seen, extending to the second dorsal vertebra—and a third diseased portion, from the seventh dorsal vertebra down to the cauda equina, which was reduced to a kind of pultaceous mass. The nerves issuing from these diseased portions of spinal marrow did not exhibit any appreciable alteration in their texture. The thoracic and abdominal organs were sound.

The reader will not fail to perceive that this dissection elucidates the paralysis and formication, which correspond exactly with the diseased portions of spinal marrow. The zone on the chest of undiminished sensibility is also accounted for by the corresponding portion of unaltered medulla spinalis.

Our author remarks that in curvatures of the spine, anterior or posterior, in ricketty people, there is no danger of compression of the spinal marrow; as the curve is always so gentle as not to incommode that organ. In lateral curvatures, however, the case is altered, as there the nerves issuing from the spine are compressed on the concave arcs of the curvatures. Another cause of slow compression of the spinal marrow is enlargement of the intervertebral cartilages, which is sometimes considerable, and is not unfrequently observed in those who die of caries of the spine. The immense enlargement of the spinal veins in old people is another cause, in our author's opinion, of compression of the spinal medulla. So also may be enumerated, in the catalogue of causes, effusions of every kind in the cavity of the spinal arachnoid—the presence of hydatids, exterior or interior to the envelopes—tubercles.

In respect to the symptoms attending these states, we must expect that they will be less prominent in proportion as the compression is slow in its progress, and extended over a great space of the spinal marrow. The principal symptoms will, of course, consist of diminution, more or less considerable—in short, paralysis more or less complete, of feeling or muscular power, or of both at the same time, together with abolition of the functions of the rectum and bladder. In the beginning of the disease, there is often a numbness, then convulsive twitchings of the muscles, and finally paralysis.

In respect to the treatment of compression, we need not say any thing. The disease is too often fatal, when the cause is a slow disorganization, whether in the envelopes, or bony fabric of the spine. When the compression is produced by fracture and depression of the vertebræ, our author thinks that trephining the spine may be a proper measure, since death will be inevitable, unless the compressing power is removed. Here our author gives a very full occount of Mr. Tyrrell's operation, as communicated to him by his friend Dr. Georgi, of Bologna, who assisted at the operation. As the English public are not yet acquainted with the case in detail, we shall here introduce the particulars of the case.

"On the 17th of October, 1822, a man, about 30 years of age, was brought into St. Thomas's Hospital, who had received a fall on his back, while carrying a heavy burthen. He had hemiplegia, and a fracture, with depression, of the tenth dorsal vertebra, was easily recognized. Sir Astley Cooper, Mr. Travers, Mr. Green, and Mr. Tyrrell, consulted together, and determined on an operation, which was performed the same day in the presence of a great concourse of spectators. Being placed on his face with the spine a little bent forwards, an incision, four inches in length, was made directly along the spinous processes of the four last dorsal vertebræ, and the muscles dissected back on both sides, so as to lay bare the arches of the ninth and tenth vertebræ, on the latter of which the crown of a trephine was applied, but it would not work there. A chain saw was then employed, which removed the spinous process of the tenth vertebra at its base, so that the fingers could be introduced under the portions of arch on both sides, which were then easily sawed off. The same was then done on the ninth vertebra, which had been fractured and depressed. About three inches of the spinal marrow and its envelopes were thus laid bare, and it was seen to pulsate, or swell and retract very distinctly. The wound was dressed simply. In a few hours after the operation the patient had some return of feeling in the lower extremities, which he had not had before since the accident. This return of sensibility, however, was only temporary. A few days after the operation, he passed voluntarily both stools and urine. The latter was bloody. Paralysis still continued. Finally, the patient sank twelve days after the operation, with all the symptoms of peritonitis and enteritis in a severe degree. These last were amply proved on dissection, which also showed the mucous membrane of the bladder very red, and the coats thickened. The dura mater covering the portion of spinal marrow denuded by the operation was black. As a preparation was to be made of the parts, no farther examination was made of the interior of the medulla spinalis." 224.

§ 5. *Commotion or Concussion of the Spinal Marrow.* This may be produced by falls or blows on the spinal column, or even on the hips or feet. The symptoms are nearly the same as those attending wounds or contusions of this organ, to wit, paralysis more or less complete of feeling and of motion; retention or involuntary discharge of urine and fæces; sometimes convulsions; and sometimes curious and anomalous symptoms, as we shall see in the detail of cases. Dr. Abercrombie, who has written a very interesting paper on diseases of the spinal marrow, in the Edinburgh Journal for January 1818, observes, that "paralysis of the lower extremities and *suppression* of urine are the symptoms that most frequently come under our observation." In this quotation, and indeed throughout the paper, Dr. A. has strangely used the terms *suppression* and *retention* of urine indiscriminately and synonymously, though they signify quite different states, and the *former* is not a concomitant, or very rarely so, of affections of the spinal marrow. He justly remarks, that concussion of the spine may prove speedily fatal, without leaving any appreciable organic change in the part after death. Boyer, Frank, and others, relate cases of this kind. Dr. Ollivier observes, that the effects of the concussion will be in proportion to the violence of the injury. Sometimes we find, after death, sanguineous effusions between the theca and the spinal marrow—sometimes the pia mater is burst in one or more points; as is the case occasionally even with the dura mater and arachnoid covering, the medulla then forming a hernia or protrusion at that part. Sanguineous effusions are also found in the cavity of the arachnoid membrane, when the concussion causes rupture of some of the small vessels. When there is appreciable alteration in the spinal marrow itself, it usually consists of a softening of the medullary substance, the product, our author believes, of inflammation. In these cases we find the vessels of the pia mater injected with blood.

If none of these organic lesions have taken place, the patient has a much better chance of life. The symptoms gradually lessen in force, and the patient recovers. We shall now proceed to an elucidation of this disease, which is doubtless much more frequent than is believed, by a detail of cases more or less copious.

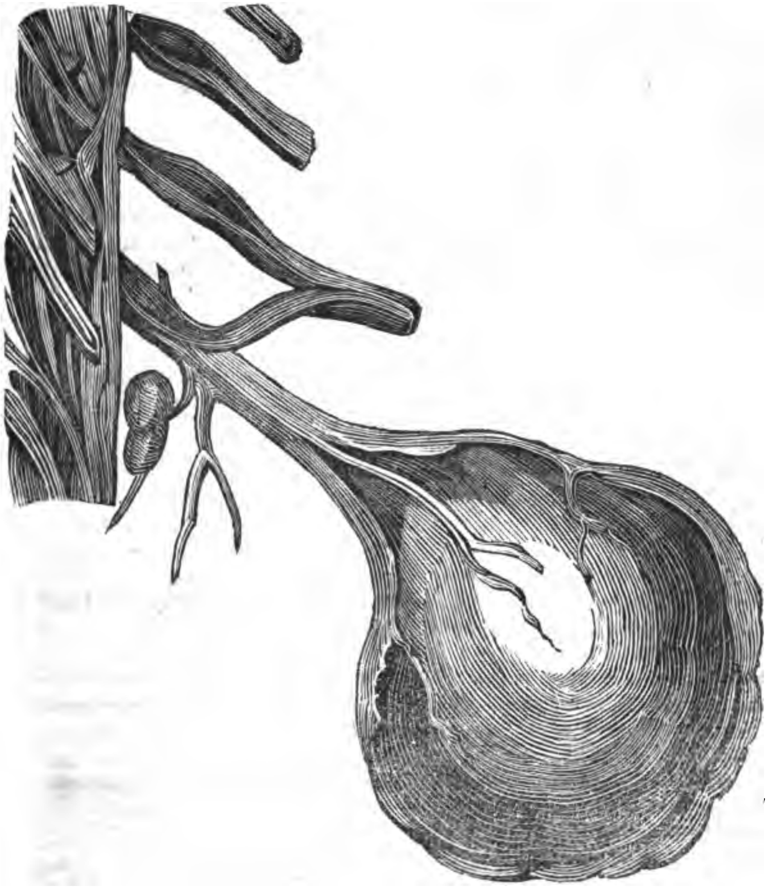
Case 1. Morgagni, in his 54th epistle, relates the case of a man who was struck by a branch of a tree on the three last lumbar vetebræ. He was carried to the Santa Maria Hospital, and died in four hours. There was no fracture of the vertebræ; but there was an effusion of blood within the vertebral canal, though the medulla spinalis appeared at this part quite sound. All the viscera was sound, and the arteries were observed to be full of coagulated blood

The following extremely curious case was carefully examined by our author's father, and, also, by M. Billard, in the Hotel Dieu of Angers.

Case 2. A woman, 49 years of age who had previously enjoyed good health, began, in the year 1820, to feel strange pains through her body, originating in the left side of the chest, and caused, as she thought, by a small scirrhous tumour which was developed in the left mamma, but which was not painful on pressure. These pains increased in intensity, and deprived her of all enjoyment of life. She tried intoxication, but that rather aggravated than alleviated the evil. Still the tumour in the mamma remained stationary, and never became sensible to pressure. The unhappy woman was forever recounting the miseries she suffered; and, at last, tired of existence, and wishing to deliver herself from the tortures she endured, she threw herself, on the 5th November, 1822, from a window in the fourth story of the house where she lodged. She was carried to the hospital, where our author saw her immediately, with the following symptoms:—Stupor, pallor of the face, great dyspnœa, pulse small and slow, skin cold, paralysis and insensibility of the trunk and lower extremities. There were various injuries of different parts of the body, which we shall pass over. She died on the evening of the 8th November.

Dissection. "In the head, the meninges were found thickened, but very little water in the ventricles. The body of the 10th dorsal vertebra was fractured transversely, but without the slightest displacement of the fractured portions. In the vertebral canal, opposite the fracture, there was an extravasation of fluid blood on the exterior surface of the dura mater. The medulla spinals appeared of its natural colour and consistence.

In the thorax, the small scirrhous tumour was examined, but presented no trace of inflammation or disease around it. There were various fractures of the ribs; but the cause of the patient's long-continued sufferings was now brought into view. In the left side of the chest, and just above the arch of the aorta, was found a tumour of a pyriform shape, the size of a hen's egg, covered by, and adherent to, the pleura on one side, and on the other, it was in contact with one of the dorsal vertebræ. From the upper part of the tumour arose a white cord, the size of a goose-quill, which was traced into the foramen between the first and second dorsal vertebræ. On examining the spinal marrow, at this part, the filaments of the anterior and posterior roots of the first dorsal nerve were distinctly seen directing their course, as usual, to the foramen, for the formation of the first dorsal. This nerve, after issuing from the spine, gave off, as usual, a posterior branch. The anterior branch (after communicating with the great sympathetic, and giving rise to an ascending twig that passed on to unite with the seventh cervical) suddenly enlarged in volume, and proceeding about an inch from the point where it gave off the ascending twig, it terminated in the summit of the tumour. In this course, its colour was not altered—its neurilema was thickened, and it lost itself in, and became blended with, the tumour in question. This tumour was white and elastic, presenting some cartilaginous spots on its posterior surface. On slitting open the nerve which served as a peduncle, the neurilema of the nerve was found to expand itself and form a sheath, as it were, for the tumour. This last, when slit open, presented a pulpy surface, of a whitish colour, and appearing to be formed of concentric fibres, without a trace of vessel of any kind in its composition.



Our author remarks, that there are many cases recorded where scirrhous tumours of this kind were found developed in the substance of nerves; but none, he believes, where the nerve terminated in a tumour. Generally, the scirrhous tissue of these tumours is strewed with vesicles or small cysts containing a fluid. Here then was, no doubt, the cause of the patient's sufferings, which could not be accounted for during life, and which were, in all probability, considered as hypochondriacal. We think it highly probable that, in many of those cases called monomania, where patients complain of dreadful sufferings that are regarded as ideal or the offspring of insanity, there would be found, if the bodies were minutely examined after death, some *physical cause* for their complaints. This woman was reduced before the act of suicide, to a state of great emaciation. This, we should suppose, was from her sufferings and mental misery, rather than from any mechanical effect which the nervous tumour could produce. The great difficulty lies in explaining how this tumour gave origin to such dreadful pains as ultimately destroyed the poor woman's reason. Was it from the stretching of the neurilema and nervous fibres themselves during the developement of the tumour ? We should be inclined to this conclusion.*

Case 3. A man, 46 years of age, was brought into the Hotel Dieu of Angers, on the 17th October, 1817, who had had a fall on his back where he complained of great pain. The lower extremities were paralyzed, with retention of urine and fæces. The pulse was frequent. This state continued till the 31st, when delirium took place, accompanied by swelling and tension of the abdomen. He died on the 3d November, in a state of great difficulty of the breathing.

Dissection. Nothing particular in the head. On opening the spinal canal, the coverings of the spinal marrow were found rent in some places, and the substance of the medulla forming herniæ at these points. There was, also, an extravasation of a sero-sanguineous kind between the membranes and medulla. The lungs were gorged with blood, but sound.

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* It is curious how the presence of a morbid growth in an internal part will often cause great functional disturbance, even where there would not appear to be much mechanical inconvenience incurred. We lately assisted our ingenious friend Mr. Bampfield, in opening the body of a female who had come into the Covent Garden Workhouse to die, in the last stage of emaciation, attended with incessant dry cough, excessive dyspnœa, and almost complete inability to swallow. She died of inanition and difficulty of breathing. On examination, there was no disease in the trachea or œsophagus. The right lung was diseased ; and just at the bifurcation of the trachea, and anterior to it, but apparently not pressing on it, there was developed a solid, irregular, semi-cartilaginous tumour, the size of a small hen's egg, apparently a diseased cluster of bronchial glands. The trachea and œsophagus were not altered in calibre or appearance at this place.—*Rev.*

There was some peritoneal inflammation and effusion. The coats of the bladder were thickened and inflamed.

Concussion of the spine, though often fatal, is not always so.

Case 4. Antony Majourel, 45 years of age, fell from a height of 36 feet, on uneven ground, by which fall he was rendered senseless. In an hour and a half after the accident, Dr. Combaldieu saw him. His intellectual faculties were disturbed, his pulse small and concentrated—feeling and motion of the lower extremities completely abolished. Two contusions were observable—one on the right arm—the other on the dorsal region about the 10th and 11th vertebræ. He was five times bled in the course of the day—the water drawn off by catheter. Next day the patient had nauseæ—the tongue covered with a mucous crust. An emetic was administered in a lavement, and operated. In this state he continued for the five following days. On the 11th day he began to feel some tingling sensations in the left leg, and after some smart frictions of the limb with a brush, he evinced some slight muscular power in the same. At this time, the power of voiding the urine returned. By the 20th day, the power of the left lower extremity was entirely restored—the right was still paralyzed. In a month both members were restored to feeling and motion.

Camper relates the case of a soldier who, in a paroxysm of phrenzy, leaped out of the window of a second floor, falling first on his feet, and then prostrate on his back. He was taken up paralytic of the lower extremeties, with involuntary discharge of urine. He required a whole year to recover from these. He afterwards died of a putrid fever, and Camper had an opportunity of examining the spine. One of the lumbar vertebræ had been fractured transversely in its body and united completely. Camper preserved the specimen.

Case 5. Charles Cagniaux, 22 years of age, fell from a fourth floor on his back and hips. He was carried to the St. Louis Hospital on the 11th June, 1821. There was observed a considerable contusion in the lumbar region and back part of the pelvis;—suspicions were entertained that there was fracture of some of the vertebræ;—complete paraplegia. Bled copiously from the arm, and numerous leeches applied on the site of the contusions. He continued in this state for several days. His water was drawn off twice a day—evacuation of fæces involuntary. Bleeding and the application of the moxa were repeatedly employed. Gradually the power of expelling the water returned, and became involuntary—the alveline action was still involuntary. At present, 4th May, 1823, the man enjoys good health; but he has not completely recovered the motion of the lower extremities. He walks by the aid of a stick, and is very liable to fall down. He has no feeling in the skin of his feet, as far as the ancle-joint; the motions of which are almost entirely lost. The sensibility is also lost in the *posterior* surfaces of the legs, thighs, and hips, while it is preserved entire on the opposite sides. The evacuation of urine and fæces is still involuntary, in spite of every means that have been tried to remove so dreadful an evil.' No deformity can be detected in the spinal column. In the above case, the sciatic nerves appear to have suffered, while the crural nerves have preserved their integrity.

Case 6. The remarkable case related by Mr. Charles Bell, in Part II. of his Quarterly Reports, was evidently a case of concussion of the spine, ending in suppurative effusion. The man was a wagoner, who was thrown off the shaft fo his cart by a sudden jerk, pitching on his back and shoulders. He was carried to the Middlesex Hospital, where he lay for seven or eight days without complaining of any thing, except stiffness of the back of the neck, being able to move all his limbs with freedom. On the 8th day he was seized with general convulsions and trismus, which last changed in a few hours, to a singular convulsive motion of the jaw, and this again to maniacal delirium. He now sunk into a typhoid fever, and in four days was found to be paralytic of his lower extremities. He died about a week after this period. *On dissection*, a quantity of purulent matter was found within the spinal canal, especially at the lower part of it. It appeared to have been formed about the last cervical, or first dorsal vertebra, and there the intervertebral cartilages had been eroded, so that the pus had escaped outwards among the muscles.

Case 7. In the 17th volume of the Edinburgh Medical and Surgical Journal, Dr. Arthure, of Dublin, has detailed a very curious case of concussion of the spine in a lady, 52 years of age, who on the 1st December, 1818, fell by accident off a chair on which she was sitting, and received a contusion on the os coccygis. The pain soon subsided by quietude, and in a few days, went entirely off; but, on the 20th of the same month, while sitting at needlework, she suddenly cried out that she was losing her senses—had got an excruciating pain in the forehead and temples—and feared that it would terminate in apoplexy. She was bled by the family apothecary, and was soon afterwards seen by Dr. A. who found her in a very alarming state of exhaustion. The pulse was scarcely perceptible—extremities cold—constant vomiting. On recruiting a little, 20 leeches were applied to the head, as the pain there continued as violent as ever. Dr. Crampton, on being called in, concluded with Dr. A. that the complaint was ascribable to the fall, and that the present symptoms were referrible to an affection of the brain, from sympathy with the spinal marrow. Blisters were applied to the calves of the legs, and a stimulating cathartic enema thrown up. Cold was, also, applied to the head. By these means she became convalescent; but, on the 4th January, she was again seized with excruciating pain in her head, "along with irritating sensations about the os coccygis, bearing-down pains in the uterine region, and spasms in the calves of the legs. She, also, felt an indescribable sensation of a painful nature, ascending along the dorsal vertebræ, and terminating about the foramen magnum of the occipital bone." In this attack, anodyne antispasmodic medicines succeeded, in conjunction with leeches to the sacrum, in removing the complaint.

Case 8. Dr. Abercrombie mentions the case of a man who had been employed in blowing up the rock near Edinburgh, and who was struck by a large piece of stone on the spine, about the lower dorsal and upper lumbar vertebræ. He instantly fell, completely deprived of the power of the lower extremities. When seen, there was such extensive swelling that it could not, be ascertained whether or not there was fracture of any of the vertebræ. He was confined to bed for several weeks paralytic in the inferior members, and with considerable difficulty in passing his water; but he gradually recovered.

Case 9. In Hufeland's Journal, is related the case of a man who fell from the top of a loaded cart and pitched on his neck, and shoulders. When recovered from the shock, it was found that he was paralytic below the neck—he could move no part but his head. He had retention of urine and obstruction of the bowels. After eight or ten days he became affected with swellings of the limbs, and a sense of pricking, followed by severe pain, but without any power of motion. He very gradually and slowly recovered.—*Abercrombie.*

Case 10. Dr. Abercrombie observes (loco citato) that concussion of the spinal marrow may produce permanent paralysis either immediately, or after a considerable interval of time. In illustration of this position, Dr. A. relates the case of a man, 43 years of age, who, about nine years previously, had fallen from the branch of a tree, and lighted on the sacrum. He was carried home deprived of the power of his lower extremities, but in ten or twelve days, recovered so far as to be able to follow his avocations. From this time, he was affected with a peculiar sense of numbness in the upper part of the left foot. After continuing in this state for four years, the numbness suddenly extended up along the same leg and thigh, and was speedily followed by paralysis of these parts. Paralysis of the other leg and thigh soon followed, and he was confined to bed for two years with complete hemiplegia. Afterwards, he recovered partially the use of the lower extremities, so as to be able to crawl about. His spine was free from distortion, but he complained of deep-seated pain, on pressure, about the last dorsal vertebra and top of the sacrum. At this place two caustic issues were inserted, and considerable improvement followed. In such cases, Dr. Abercrombie thinks the nature of the disease is probably that of chronic inflammation of the spinal cord or its envelopes.

Before we close the subject of concussion, we may say a word or two respecting the treatment. In this, as in concussion of the brain, we should not fly to the lancet the moment a man has met with an accident, merely because he has received one. We should allow the first effects of the shock to recede, especially if there be faultering of the pulse, and paleness of the skin. When these are over, then we may safely deplete and counter-irritate, not only to prevent, but to control re-action, which sooner or later must come on.

§ VI. *Effusions into the Spinal Canal.*—These are of different kinds, and in different situations. Thus they may be of a liquid or gazeous nature;—and they may be external or internal of the dura mater and arachnoid coverings. Of the liquid effusions or extravasations, there have been observed several kinds, as serous, purulent, sanguinolent, &c.

A. *Sanguineous Effusion—Hæmatorachis.*—In accidents from external violence, we often find blood extravasated within the spinal canal. When this effusion is within the cavity of the spinal arachnoid, it often originates in the head, and descends along the spine. Of the latter kind is the following case.

Case 1. Dessieres, 26 years of age, received, on the 30th November, 1822, a foil thrust on the left temple, by which he was felled on the spot. Conveyed to the Hotel Dieu of Anvers, he appeared in a profound sleep, breathing slowly and laboriously, with froth issuing from his mouth, and slight convulsive twitchings agitating his limbs. He was bled from the arm, without any sensible effect. He died three hours after the accident.

Dissection. The meningeal artery was torn, (there being a perforation of the bone) and considerable effusion of blood on the surface of the brain, and also along the base of the skull. The meningeal cavity of the spine was filled with fluid blood.

The point of the foil had penetrated an inch into the substance of the brain.

Case 2. Bonetus relates a case of sanguineous effusion in the spine, from spontaneous rupture of vessels at the base of the brain.

Ann Walterin, 70 years of age, had been in the habit of frequently losing blood by venesection. She went out one morning to gather wood, but did not return. She was found dead, with a very slight wound on the left temple. Bonetus examined the head, and pronounced that the wound was merely from falling down, death being produced by an internal cause. A great extravasion of blood was found between the pia mater and brain at its base, and thence extending down through, and filling, the spinal canal. The blood issued from small arterial branches arising from the carotids and vertebrals at the basis of the brain.

Case 3. Mr. Chevalier relates, in the third volume of the Medico-Chirurgical Transactions, an interesting "case of spontaneous extravasation of blood within the theca vertebralis, which soon terminated fatally," occurring in a girl of 14, accompanied by pain in the back and head, sickness on sitting up, and quick pulse. In about a fortnight, she complained of a sudden and violent increase of pain, was immediately seized with convulsions, and died. On dissection, the brain and viscera were found healthy, and the spine was free from any external appearance of disease. But, on opening the spinal canal, it was found filled with blood, imperfectly coagulated—"it is, therefore, probable, that the vessel first gave way at the commencement of the illness, and again, to a much greater extent, at the time the convulsions came on." Mr. Chevalier mentions another case somewhat analogous, occurring in a child only a year old. These cases he considers as a sort of partial spinal apoplexy, which should be treated by early bleeding in order to prevent the increase of the extravasation.

Case 4. In Mr. Howship's "Observations in Surgery," there is related the case of a boy, 14 years of age, who received a violent jerk of his neck by a cord which was thrown over his head while in a swing. He felt no bad effects at the time, but after a time, he was observed to be weak and inactive, becoming gradually more so, with stiffness of the neck and difficulty in moving his head. In nine months after the accident, the weakness in the lower extremities amounted to paralysis, which was speedily followed by the same in both arms, with retention of urine and obstinacy of bowels. In a short time after this, he was seized with very violent pain in the spine. His breathing became quick and laborious, and he soon died. On dissection, a quantity of extravasated blood was found in the spinal canal, lying between the bone and theca vertebralis, partly coagulated and parly fluid, appearing to have come from the upper part of the canal, about the second or third cervical vertebra. We shall conclude the subject of Hæmatorachis with the substance of a remarkable case recorded by M. Gaultier De Claubry in the Journal Général De Medecine, for 1808.

Case 5. M. Durand, 61 years of age, who had always enjoyed good health, retired to his country-seat from the storms of the Revolution, where he spent his time in agricultural pursuits. In August 1808, he came up to Paris, and the day after his arrival found himself rather unwell, when Dr. De Claubry visited him. He complained of pain along the spine, which he said he had felt in a degree, for some time past accompanied by a sense of weight and numbness which extended to the thighs, legs, and even to the feet. These last symptoms he attributed principally to the fatigue of travelling up to town in a voiture, where he was incommoded by too many passengers. The vascular system was tranquil, the skin of its natural temperature, the pulse was rather full. All the other functions in a state of integrity. He was advised rest, and the warm bath. He was visited at 10 o'clock in the morning. At 11, Dr. De Claubry was summoned, and informed that the patient could not move his limbs, and that both urine and fæces came away involuntarily. In this state our author found him. The pulse had lost some of its force, the breathing was not quite easy, the countenance was altered. While answering some questions put to him by his physician he expired.

Dissection. There was some water in the lateral ventricles of the brain, and blood flowed from the vertebral canal into the basis cranii, when the spinal marrow was cut across at the foramen magnum. When the spinal marrow was laid open, this fluid flowed out still more abundantly. When the envelope of the spinal marrow was slit open, this part was disorganized "*comme une bouillie d'un rouge sang de bœuf*," an expression which we cannot readily render into English. This appearance presented itself from the sacrum to the second dorsal vetebra, where something like spinal marrow was seen. It was not till he got up as high as the 7th cervical vetebra, that the medulla spinalis appeared sound in substance, but of a deep red colour.

In attempting to slit the spinal marrow longitudinally, it fell to pieces under the scalpel, and it was only at its upper extremity, near the head, that it preserved its natural consistence. The interior of the organ participated in the same hue as the exterior, gradually diminishing in intensity as it approached the brain. There was sanguineous effusion between the membranes and the spinal marrow itself, throughout the greater portion of its extent.

B. *Serous Effusion.*—In opening the spinal canal there is very frequently found some serous effusion—indeed, more frequently and in greater proportion, (relatively to the extent of surface) than in other cavities of the body lined by serous membranes—whether that effusion precolates down from the brain, or is exhaled from the serous envelopes of the spinal marrow. This effusion is sometimes yellow and limpid—sometimes whitish and turbid—not unfrequently tinged with blood. Our author has remarked that, in general, the quantity of effusion was in proportion to the turgescence of the venous system of the medulla and its envelopes. The lentor and difficulty of the venous circulation in this region, account sufficiently for this augmented exhalation, and explain why we find more of it here, after death, than in other serous cavities. These effusions in the spine have been frequently observed in opening the bodies of old people who have died of apoplexy—and, also, of certain cerebral irritations. This serous effusion is sometimes accompanied by convulsions. Bonetus relates the case of a person who died phthisical, after having been, for twelve years, harassed with spasms and convulsions of the trunk and members, which prevented him from being at rest for one hour at a time, night or day. The paroxysms, which were repeated at very short intervals, were succeeded by a languor and loss of voluntary power, amounting nearly to paralysis—then again the convulsive agitations. On opening the body, there was found an abundance of limpid serum in the anfractuosities of the brain and in the vertebral canal. The spinal marrow was notably decreased in volume, an effect attributed by Bonetus to the pressure so long-continued of the serous effusion. The same author, indeed, reports several cases analogous to the above, but not so remarkable in kind.

In cases of gibbosity of the spine, we not unfrequently find a good deal of serous effusion in the spinal arachnoid cavity. It is generally limpid, unless caries of the vertebræ has determined phlogosis of the membranes, in which case it is turbid. Concussions of the spine may produce serous effusions, but more frequently sanguineous. Here our author quotes a remarkable case lately published in M. Magendie's Journal, by Dr. Rullier. We shall give the prominent heads of the case.

Mr. L. 44 years of age, (at three years of age he had shown some curvature of the spine, in consequence of which the right shoulder became elevated) for the ten preceding years had experienced some embarrassment in the movements of the arms, and, subsequently, some pain and numbness in the curved portion of the spine. On the 21st January, 1815, he fell, by accident, prostrate on the ground, from which he was unable to raise himself, till assisted. From this time, his upper extremities became contracted, stiff, and contorted. The point of curvature, or prominence of the spine, now became very painful and gradually more and more so. The right shoulder continued to rise, and the head to sink between the shoulders. He lost all power of the upper extremities. Blisters, moxas, and local bleeding did no good. With the exception of the upper extremities, all other parts of the body were unimpaired. The patient walked about. Although motion was lost in the upper extremities, they preserved their sensibility. For some time previously to M. Rullier's attendance the patient had coughed, and expectorated with difficulty. He now became devoured by hectic fever—and he died on the 31st October, 1822.

Dissection. The brain was very firm, and apparently quite healthy—some water in the ventricles. When the spinal canal was laid open, the spinal marrow did not appear to have suffered any compression—it took the twists and turns of the spine itself. There was a considerable quantity of serous effusion in the spinal arachnoid cavity. In some parts of the pia matral covering of the medulla there was much injection of the vessels, arterial and venous. When the coverings were slit open, the spinal marrow appeared sound from the head to the origin of the fourth cervical nerves. Two thirds of the dorsal portion (counting from below) were also sound; but, between these two portions—that is, for the space of seven inches, or more, corresponding to the origins of 8 or 9 pair of nerves, the spinal marrow had undergone a remarkable alteration. It was reduced to a state of almost complete fluidity, (veritable liquide) flowing out when the membranes were punctured. At the same time, it was found that some little trace of organization was still discoverable on the anterior portion of the spinal marrow.

We believe there are no characteristic symptoms by which we can distinguish effusions on the spinal marrow from some other affections of that part. They cause paralysis and, sometimes, convulsions; but so, also, do several other morbid conditions of the spine. There is a species of paralysis, however, which Dr. Ollivier thinks may be recognized during life, as resulting from spinal effusion—namely, the ascending or descending paralysis—that is, a paralysis which progressively marches from above downwards, or *vice versa*. Of this disease we shall present an example, which happened at the Hospital, Necker.

Case. Adolphus Desurmont, aged 20 years, a blacksmith, entered the Necker Hospital on the 11th October, 1822, presenting the symptoms of gastro-intestinal fever. He had, four times in the course of the fever, a profuse nasal hæmorrhage, without crisis; and the diseas was protracted till the 30th day, when the symptoms began gradually to abate, and in 30 days more the cure appeared to be complete, except some debility. One evening, while walking in the ward, he felt a remarkable numbness in his lower extremities, which soon bent under him, and he fell to the ground. On being put in bed, he vomited up a quantity of yellow bile. His skin was hot and his pulse frequent. No disturbance of the intellectual functions. He could sleep none that night. Next day nearly the same. The paraplegia was incomplete and the skin was the seat of a constant sense of formication. The numbness extended no higher than the epigastrium. He felt a pretty acute pain along the spine, as high up as the middle of the dorsal region. The upper extremities were entirely free from paralysis. He continued the same till the fourth day, when the pain in the back increased, and extended up to the nucha, the arms being weakened and somewhat benumbed. There was still heat of skin with quickness of pulse. On the fifth day, the numbness of the upper extremities was increased, as well as the dorsal pain. A gangrenous eschar, also, appeared on the sacrum. On the sixth day there was less numbness in the upper extremities, and the amelioration gradually went on, from this time, from above downwards, till the lower extremities entirely recovered sense and muscular power, and the patient, ultimately, was discharged from the hospital cured. Our author thinks, and with reason, that there was, in this case, some inflammation of the coverings of the spinal marrow, terminating, probably, in slight effusion, which was ultimately resorbed.

C. *Gazeous Exhalation into the Cavity of the Spinal Arachnoid; or Pneumorachitis.*—There are numerous cases on record of gazeous collections in different parts of the body, but none, that our author could find, where the arachnoid cavity of the spine was the seat of the pneumatosis. It is not uncommon, he remarks, to find the lumbar portion of the meningeal canal distended by a gazeous fluid, inodorous and untinged, which cannot be attributed to putrefaction, as it is seen in subjects recently dead, and not found in bodies that have been long in a state of putrescency. In a woman, 65 years of age, who died of chronic peritonitis, our author found the meningeal canal in the lumbar region very much distended with a gazeous fluid, which rushed out as soon as he had made a puncture in the dura mater with the scalpel. There was, also, some liquid effusion here. The woman had been dead only twenty-two hours, and no signs of putrefaction were present. In another woman, who died of chronic colitis, a frothy serous effusion was found in the lumbar portion of the meningeal cavity, the vessels of the meninges being exceedingly injected. In a little child, three years of age, who died of hydrocephalus acutus, the spinal dura mater was much distended, especially its lower two thirds, by a gazeous fluid, which escaped when the membrane was punctured. Six or seven instances of this kind are mentioned by our author. The subject is connected with an obscure but interesting question in pathology—the generation of gazeous fluids in various parts of the body, in a sudden and mysterious manner, very puzzling to the pathologist That air and other gazeous fluids are generated in the stomach and intestines, in some other way than merely a chemical one, namely, by a species of secretion, has been often suspected; and, we think, with great reason. There is no other way of accounting for many tumours which suddenly spring up in other parts of the body also, of which we have seen some, and heard of many others. Bonetus, (vol. II. p. 276) in his Sepulchretum, states, though not with sufficient minuteness, the case of a nobleman who had been a long time afflicted with a chronic disease; the nature of which he does not describe. He was seized with inflammation of the throat, and, at the same time, a tumour was developed on his back. He died; and, on dissection, when the tumour was opened, nothing but air escaped.

About six or seven months ago, we were consulted, by letter, respecting a lady, the wife of a medical gentleman residing in a distant part of the kingdom, who had several times become suddenly affected with a most tense and painful globular swelling in the region of the sigmoid flexure of the colon. In some of the attacks it arrived at its full size in six hours, lasted many weeks, gave dreadful torture, and suddenly disappeared, without any sensible evacuation from the system. In one of these attacks, a regular physician, a fellow of the Royal College of London, examined the tumour with great care. He pronounced it to be *a solid organized body;* but, when he was informed that it required but six hours for its growth, and that it had made sudden appearances and disappearances previously, he candidly confessed he knew not what was its nature or contents. During these attacks, there was no obstruction to the passage of the fæces, which were regularly discharged daily, so that there was no fair ground to suppose the tumour (which was excessively tense, even, and globular) consisted of fæcal accumulations. It was subsequently to the last attack that we were consulted; and we gave it as our opinion, that the tumour was of an airy or gazeous nature, situated either in one of the cells, between the coats, or in the cellular texture under the sigmoid flexure of the colon. We should be much obliged by any facts bearing on these sudden and mysterious productions, addressed to the care of the Editor of this Journal.

§ 7. *Spinal Arachnitis.*—It is exceedingly rare to find spinal, unaccompanied by cerebral arachnitis. The symptoms and post mortem appearances of arachnitis have been amply detailed by us in the 8th Number of this Journal, for March, 1822, to which we refer for particulars. In order not to break the chain of our analysis, however, we cannot entirely pass over this section of the work before us unnoticed.

Our author observes that, generally speaking, the arachnoid lining the dura mater of the spine, is found (where inflammation had existed during life) covered by a whitish, opake, or membraniform exudation, more or less adherent, and of greater or less extent. Even puriform secretions have been found on its surface. The membrane itself becomes opake, sometimes red, and often contains, between its laminæ, a fluid of various colours and consistency. It is rare, however, to find organic alterations of the spinal arachnoid, independent of structural alterations in the spinal marrow itself. Our author relates one example, which we shall here introduce.

Case. Jean Baptiste Hacquart, 13 years of age, of apparently good constitution, was brought to the HOPITAL DES ENFANS, on the 19th of March, 1823. No history of his previous symptoms could be obtained, except that, during the preceding summer, he had complained of severe headachs. Eight days previously to his entering the hospital, he was suddenly seized with hemiplegia of the left side, without premonitory symptoms. The following were the phenomena now presented:—Face flushed—speech embarrassed—tongue white—loss of memory—cough—deglutition difficult—pulse feeble, slow—acute pain in the epigastric and hypochondriac regions on pressure. The patient's head was thrown backwards, with stiffness and pain along the whole of the spine, augmented by any attempts to raise him up in bed. The left, or paralyzed members were rigid, but not divested of their sensibility—involuntary discharge of urine. 21st. Bowels opened—cough less—deglutition more easy—pulse more developed—thirst—acute pain in the neck and along the spine. A repetition of leeches to the back. Same state till the 24th, when more muscular power was observed in the left arm, which was increased by he 25th. On the evening of this day, much headach. 26th. He could carry the left hand to the head, the lower extremity being still paralyzed—pulse very slow. This state continued till the 31st, when pains in the lower extremities became very severe. On the 6th April, the pains were so increased as to cause the patient to cry out with the agony. He had been taking the strychnine, which was now discontinued. On the 10th, nearly in the same condition—the trunk being now in a completely tetanic state of rigidity. The symptoms went on increasing, and death closed the scene on the 15th April.

Dissection. In the head was found a double-lobed tubercle, the size of two small nuts, pressing on the middle lobe of the *right* hemisphere of the brain—and in another part of the same lobe, there was another tubercle the size of a pullet's egg. In the parietes of the right lateral ventricle, was a third tubercle, and in several other places, tubercles of a small size. All these tubercles were encysted, and the purulent-looking matter which they contained was fluid, yellow, but of some consistence. These, by many people, would be called abscesses in the brain, but, we think, very improperly. The *parietes* of these cysts were formed of two distinct membranes, the exterior one of which presented numerous vascular ramifications running from the brain upon the cyst. Between the meninges was found a purulent exudation:—and in the spine, a similar exudation was discovered along its whole extent, between the arachnoid and pia mater. The latter membrane was red, injected, and thickened. The veins of the spine were unnaturally turgid; but the substance of the medulla spinalis was perfectly healthy in appearance.

Another case is briefly related of a child, about four years of age, who was carried to the Hopital des Enfans, on the 2d February, 1823. The symptoms were, great difficulty in swallowing—fixedness of the eyes—to which succeeded, in a short time, tetanic symptoms, as trismus, opisthotonos. Leeches, opium, frictions, and the warm bath, did no good, and the disease persisted till the 11th of the same month, when the child died. On dissection, the brain was seen to be much injected, and of a firm consistence. In the ventricles, the arachnoid was thickened and injected. *Spine.*—In the middle of the dorsal region, there was a reddish infiltration into the cellular tissue placed between the dura mater and the osseous canal. On slitting the membranes, their cavity was found filled with a serous fluid. The vessels spread over the surface of the pia mater were exceedingly injected in the middle of the dorsal region only, where the arachnoid membrane was covered with an albuminous concretion, for the space of about four inches. The substance of the spinal marrow was slightly injected at this place.

The following presents an example, also, of circumscribed spinal arachnitis.

Augustus Berard, 28 years of age, entered La Charite on the 4th of April, 1823, having come from the St. Louis Hospital, where he had been under treatment for a deep-seated pain in the lumbar region, which succeeded the lifting of a heavy burden in September, 1822. A blister had been applied to the part, and produced an ulceration that was very difficult to heal. On entering the CHARITE, he complained of general debility, depression of spirits—and he was much emaciated. On the 7th, the following symptoms were noted:—difficulty in articulating words, the intellectual faculties not appearing impaired—mouth drawn a little to one side—face rather flushed—the left arm partially paralyzed—involuntary discharge of urine and fæces. (Blisters, lavements, aperients.) 8th. Had several evacuations—mouth not so much drawn—face pale—inability to articulate. 9th. Insensibility to surrounding objects. Died next day.

Dissection. Vessels of the head gorged with blood—extravasation of concrete matter under the arachnoid covering the left hemisphere—serous effusion into the right lateral ventricle. In the spine, there was found a turbid whitish serous effusion (about 12 drachms) in the lumbar region—injection of the arachnoid for the space of an inch in this region—the vessels on the surface of the pia mater were injected—the spinal marrow itself apparently healthy.

OBSERVATIONS.

Hippocrates, our author thinks, appears to have recognized spinal arachnitis under the denomination of *pleuritis dorsalis*, describing it as accompanied with acute pain in the back, difficult respiration, and terminating commonly in death, on the fifth or seventh day. If this period was passed, the patient recovered. We think Hippocrates knew little or nothing of the matter. His prognostic remark is decidedly erroneous, and, therefore, the probability is, that he meant some inflammation within the cavity of the chest, and not within the cavity of the spine. In by far the majority of cases, spinal arachnitis is connected with, or extended to, the arachnoid of the brain. Whether isolated or complicated, our author considers the two following symptoms as nearly pathognomonic of the disease: viz. —1st. General contraction of the muscles on the posterior part of the trunk, varying in intensity, from simple rigidity to the most violent *opisthotonic* contraction. "This was observed in cases where dissection showed the arachnitis confined to the spinal meninges, and where those of the head were no way implicated." The second symptom is pain in some part of the back, varying also in intensity, and sometimes presenting remissions, or even intermissions. These symptoms, when present, may, he thinks, indicate, with certainty, spinal arachnitis —for in every instance where dissection took place after such symptoms, inflammation of the spinal arachnoid was found. There are other symptoms, but not so constant. There are pains, more or less violent, in the lower extremities, with more or less of stiffness both in these and in the upper limbs—trismus—convulsions or paralysis—difficulty of breathing. This last symptom is pretty constant. The convulsions and paralysis may depend on cerebral as well as spinal affections. Tetanus has been ascribed to inflammation of the spinal envelopes; but dissection has not always, though it has sometimes, confirmed this pathology. Authors who have touched on this subject have not, in general, been explicit enough in discriminating inflammation of the spinal marrow from that of its coverings. Dupuytren observed the envelopes alone of the spinal marrow inflamed in a man who died of tetanus. Brera found the spinal marrow itself affected in some cases of this kind.

§ 8. *Myelitis*; or, *Inflammation of the Medulla Spinalis.*—The *post mortem* appearances, where this part has been the seat of inflammation, are generally a softening of the medullary substance, with more or less of disorganization—sometimes amounting almost to a state of fluidity, yellowish or purulent. sometimes this disorganization occupies the whole diameter of the spinal marrow, sometimes only half of it. The same may be said of the longitudinal extent of the disease. Many physicians, and among others *M. Recamier*, regard these softenings of the brain and spinal marrow as a degeneration unconnected necessarily with the process of inflammation; but our author, and, indeed, the greater number of continental pathologist, are of a different opinion, and consider the change of structure in question, as the result of inflammatory action more or less acute. It is, perhaps, no valid objection to this doctrine, that inflammation frequently produces an opposite condition, viz. an induration of the spinal marrow. We see, in fact, that phlogosis produces diseased states of other structures of the body, as opposite to each other as those of softening and induration. This induration is not unfrequently accompanied by an augmentation in volume of the part in question; of which Bergamaschi, Portal, and others, have related instances. Esquirol has frequently found the spinal marrow indurated in epileptic patients, and so has the younger Pinel. Our author found this induration and enlargement of the spinal marrow in epileptics, quite independent of any lesion of the brain or its membranes. In a young woman, who became epileptic in the invasion of 1814, and who died in October, 1822, he found the spinal marrow so hard and tough that it could scarcely be torn by the fingers. If the lesion in question be the result of phlogosis, that phlogosis must be, in general, of a very slow kind; as this degeneration is only found in subjects who have long laboured under chronic affections of the nervous system. In respect to *softenings*, however, *they* have been found very often the result of acute forms of inflammation. We shall now proceed to the illustration of *Myellitis* by a selection of cases from the ample store collected by our industrious author.

Case. Margaret Marshal, aged 79 years, hitherto enjoying good health, for her time of life, entered the Infirmary on the 26th January, 1822, labouring under symptoms of pulmonary catarrh. A few days afterwards, she complained of violent pain in the head. There was no sensible general disturbance of functions. It was supposed there was slight congestion of the brain, for which aperients were ordered. The cephalalgia continued, and she complained of a sense of formication in one of the arms and one of the legs, the powers of which were, also, diminished, as well as the sense of feeling. At length, complete paralysis of the upper and lower extremities took place, and the woman died comatose. It was prognosticated by M. Rostan and others, that softening of the brain would be found.

On dissection, the meninges were found infiltrated, but no softening of the brain could be discovered by the most careful examination. The spine was, therefore, opened; and, in the cervical region, at the upper part, was found a softening of the whole diameter of the medulla, for the space of about an inch and a half. The colour of this part was yellow, and its consistence that of bouillie, without any trace of its natural organization.

Case. Jack Prevost, 75 years of age, entered La Pitié, on the 12th August, 1822. He reported that he had a fall, in July 1821, on the *left* side of the chest, since which he experienced pain there, and difficulty of breathing. Ten months after the accident, he began to feel a most disagreeable itching in the *left* lower extremity, which he, in vain, attempted to relieve by scratching. Gradually, the itching subsided; and, in proportion, the muscular power of the limb declined, so that, finally, paralysis succeeded the pruritus. The same succession of events took place in the lower extremity of the *right* side. On examination at the hospital, he presented the following symptoms; —slight protuberance at the lower part of the dorsal region of the spine—complete paralysis of the lower extremities—sensibility of the parts greatly diminished, especially in the legs—great torpor of the bowels, the patient not having had a stool for ten days—slight convulsive twitchings of the paralyzed limbs. A seton was inserted in the nucha, and the extract of nux vomica was given, which only increased the spasmodic movements without producing any good. He died on the 31st of the same month.

Dissection. In the dorsal region of the spine, a puriform fluid was effused between the bony canal and the meninges, opposite the gibbosity of the spine. The spinal marrow, at the corresponding point, was entirely disorganized, being softened into a substance resembling cream. Immediately above and below this disorganization, the spinal marrow presented its natural structure, except that its vessels were very much injected and its substance was red.

In this case, we cannot but agree with Dr. Ollivier, that the softened portion was the result of an inflammatory action.

We have seen that destruction of the *anterior* roots of the spinal nerves abolished *motion*, and that of the *posterior sensation*, in the parts to which the nerves were distributed. This result of experiments made on animals, is confirmed by the following case in the human subject. The case was communicated to our author by Professor Royer Collard.

Case of softening of the Anterior Portion of the Spinal Marrow.—Louis Spreval, a fusileer in the 5th demi-brigade of Veterans, entered the MAISON ROYALE DE CHARENTON, on the 17th October, 1806. No precise information could be collected respecting his complaints anterior to this period. During the first seven or eight years of his residence there, he was taciturn, indolent, and idle. It was difficult to get him from his bed. Few rational answers could be obtained from him on any subject. His gait was unsteady, and his lower extremities tottered as he walked. The motions of his arms were free—pulse slow and feeble—appetite, disgestion, and sleep natural. Sometimes he had transient paroxysms of maniacal excitement. By the end of nine years, his lower extremities had become completely paralytic, *yet they preserved their sensibility.* For many years his urine and stools came away involuntarily. His intellectual faculties became quite abolished—he merely ate, drank, and slept. At length, he died, on the 2d March, 1823, in consequence of a bowel complaint.

Dissection. Marasmus. Cranium like ivory, and thrice the natural thickness. Dura mater thickened. Arachnoid healthy—as was, also, the pia mater, except where it covers the pons varolii and copora olivaria, where it was thickened, condensed, and of a blueish colour. On raising the pia mater from the corpora olivaria and pyramidalia, these bodies were found softened and converted into a sort of fluid pulp, which condition obtained along the whole front of the spinal marrow downwards—while it could be traced upwards to the thalami nervorum opticorum, corpora striata, and even into some of the convolutions of the brain. All other parts of the brain were sound in appearance, as was the cerebellum, excepting the commissure of the latter, which was indurated, forming a striking contrast with the neighbouring softened parts. The *anterior roots* of the spinal nerves had lost their natural consistence; while the *posterior* part of the medulla spinalis, and the *nerves* which issue from it, were perfectly sound, It is rare, as our author observes, to find such an exact correspondence between the symptoms during life and the appearances after death. This case is certainly, we think, decisive of the difference of function in the anterior and posterior spinal roots.

It has been remarked that, in almost every instance, the paralysis is on the side *opposite* to that where the injury is seated in the brain—and on the *same side* as the injury or disease of the spinal marrow—proving very fairly that there must be a decussation of the cerebral and cerebellic substance somewhere about the origin of the spinal marrow, and not afterwards. But in the nervous system, the strangest anomalies are sometimes presented, so that we can only make an approach, in most cases, to *probability*, not certainty. Thus, there have been observed unequivocal instances of paralysis on the *same side* as the cerebral lesion, and on the *opposite side* to that of the spinal injury or disease. An example of the *latter* kind (of the *former* some will be found in our Periscope) is quoted by our author from Portal.

Case. "A woman had experienced, for many years, smart convulsive twitchings of the left lower extremity at each menstrual period. At 40 years of age, the catamenia ceased, and then the member abovementioned became completely paralytic. Sometime afterwards, convulsive twitchings were felt in the left arm, and the woman died comatose. On inspecting the body and opening the spine, the arachnoid and pia mater covering the spinal marrow, were found inflamed opposite the last dorsal, and first lumbar vertebræ. The spinal marrow itself was reddened and softened on its *right* side, but perfectly sound in appearance on the *left*."—*Portal Anat. Med. tom.* IV. *p.* 116.

The above is merely an exception to a general rule. It is not more remarkable than a case recorded by M. Jaussen, Surgeon of the Hotel Dieu of Lyons. A young girl of 13 years of age, died after being affected for some time with gibbosity of the spine in the dorsal region. On dissection, two of the vertebræ were found carious, and, at this place, the spinal marrow was flattened considerably for a space of five inches. Its membranes were inflamed, and its nervous pulp reduced to a state of putridity. What was most astonishing was, that four days before her death, the girl had not only moved her limbs, but actually got out of bed without assistance. Neither were the functions of the abdominal or pelvic viscera at all deranged to the last. Such cases are perfectly inexplicable according to our present knowledge, provided no error crept into the observation or recital of them.

There are but few examples on record of *induration* of the spinal marrow. The following is recorded by M. Portal, and it appears to have been the consequence of inflammation.

Case. M. De Causan, experienced, at first, a sense of formication in the fingers of the right hand, and, in a little time, of the right foot, which became less sensible, but still possessing the power of motion. These parts became emaciated and cold. These phenomena augmented gradually, extending from the fingers and foot to the fore-arm and leg, the members gradually wasting. The patient went on crutches. The whole of the left side gradually presented the same phenomena as those of the members, the patient being, at length, confined completely to bed, deprived of all power of motion. The respiration and deglutition continued free, nor were the other functions materially disturbed. But the sense of sight and hearing became gradually extinct; and then the other functions were insensibly led into a state of derangement which ultimately ended in death.

Dissection. The brain was perfectly sound; but the cervical portion of the spinal marrow was completely indurated, so as to assume a cartilaginous appearance. The membranes covering this indurated portion were red and very much inflamed.

Case. In Dr. Abercrombie's paper on spinal affections, we have the case of a man whom he did not see during life, but at whose dissection he was present. He had been subject to a purulent discharge from the left ear, for some years, attended by occasional attacks of severe pain in that side of the head. In April 1817, he was confined part of each day, for a week, by this pain, his appetite being bad and his sleep disturbed; but without much frequency of pulse. About the end of the week, he complained of pain extending down his neck, and, in proportion to this extension of pain, the head became easier. When the pain arrived at the lower portion of the spine, it spread from thence round the body, particularly to the spinous processes of the ilia, accompanied by abdominal uneasiness and pain and difficulty in making water. From the violence of these complaints, his sufferings became such that he could not lie in bed five minutes at a time, being obliged to be constantly walking about his room in extreme agitation, grasping the lower part of his back with both his hands, and gnashing his teeth from intensity of pain. He was sometimes incoherent and unmanageable. In a few days after this he died. No paralytic affection had been observed at any period of the complaint—no dyspnœa —no convulsion.

Dissection. No diseased state of brain could be detected. Under the medulla oblongata some gellatinous matter was found, and a considerable quantity of purulent matter flowed from the spinal canal. On laying open the vertebral canal, the spinal marrow, throughout its whole extent, was found covered with purulent matter lying between its membranes. It was rather more abundant at three places than elsewhere—at the upper part of the canal, near the foramen magnum—about the middle of the dorsal vertebræ—and at the top of the sacrum. The substance of the spinal marrow was remarkably soft, and in some places much divided into filaments. All the viscera were sound.*

Symptoms. On consulting the various authors, who have treated of inflammation of the spinal marrow, we shall find much difficulty in distinguishing the pathognomonic symptoms of this disease. In most cases, inflammation of the substance and of the coverings have been confounded together. According to the author before us, (M. Ollivier) the most constant symptom is excessively acute and deep-seated pain, accompnaied by burning heat in the course of the spine, exasperated by motion. According to Klehss, the pain is also augmented by lying on the back, especially in a feather bed, which admits of curvature of the spine. Pressure does not aggravate the pain. Sense of formication in the limbs, and more or less of involuntary discharge of urine and fæces, generally accompany myellitis. Not very unfrequently we find paralysis beginning below and ascending upwards, till at length the muscles of respiration are paralyzed, and death, by asphyxia, is the result. Sometimes, though more rarely, the paralysis takes a descending course. The pulse is usually frequent and irregular. There are various other phenomena which occasionally attend, as tetanic spasms, aphonia, difficult deglutition, dyspnœa, &c. especially when the disease has acquired a certain degree of intensity. In the midst of this commotion of the vital and animal functions, we find the intellect undisturbed—which is not the case when the arachnoid membrane is the seat of disease.

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* Edinburgh Journal, vol. 14.

When treating of the post-mortem appearances, it was remarked, that the disease might occupy a part or the whole of the spinal marrow. Our author thinks that, to a certain degree, we may ascertain this circumstance during life by the symptoms. Thus, when the superior portion of the medulla is inflamed, in the neighbourhood of the tuber annulare, there will generally be disturbance of the senses, from the extension of the disease to the encephalon. In these cases we shall have trismus, grinding of the teeth, red tongue, difficult deglutition and speech, irregularity of the respiratory function, vomiting, paralysis of the whole body, and speedy death by asphyxia. The symptoms of hydrophobia are sometimes produced by this state of things. The symptoms attending inflammation of the spinal marrow, as it descends towards the loins, may be easily appreciated, and have been detailed in the cases related.

The above observations relate to *acute* inflammation of the spinal marrow. When it is *chronic*, it is frequently unaccompanied by pain; and paralysis of the limbs, derangement of function in the rectum and bladder, are often the first symptoms which arrest our attention. The three following cases are quoted by Dr. Abercrombie from M. Brera.

"1. A woman, aged 23, who had suffered considerably from syphilis, was seized with a severe quotidian intermittent, which proved very tedious, and resisted all the usual remedies. After some time, it was accompanied by pain in the lumbar region, diarrhœa, tormina, tenesmus, general debility, and emaciation. About three months after the commencement of the fever, she began to be affected with weakness and convulsive motions of the left lower extremity, resembling chorea. In walking, the leg was dragged; and if she attempted by a strong effort a greater degree of motion, it was thrown into convulsive distortions. Soon after, the left arm became affected in the same manner, and there were also convulsive motions of the face and eyes. At this time, the complaints in the bowels continued, but ceased soon after. The other symptoms increased. The difficulty of moving the limbs soon amounted to nearly complete paralysis; and to this were added, difficulty of articulation and diminution of memory. These terminated in loss of speech, coma, and death, which was preceded by general and terrible convulsions. Her death happened rather more than a month after the commencement of the convulsive affection of the leg. On *dissection*, some serous effusion was found in the thorax and in the ventricles of the brain. The spinal marrow was soft and flaccid, and to a considerable extent suppurated. Its investing membrane was in many places covered by a puriform fluid. There was also serous effusion in the spinal canal.

"2. A man, aged 40, was received into the hospital of Crema in the spring of 1804, with no other complaint but general weakness and depression, for which no cause could be assigned. He lay constantly in bed, but complained of no pain; his appetite was good, and he was free from fever. Suspicions being entertained that he was feigning, threats and entreaties were used to induce him to exert himself, but in vain. Meanwhile, from being lean and pale, he became fat and ruddy. Thus he continued through the summer and autumn. As winter approached, he lost his appetite, and became lean and cachetic. In February 1805, he became completely paralytic, both in his legs and arms, and died suddenly in March. On dissection, all was sound in the head, the thorax, and the abdomen. In the spinal canal there was much effusion of bloody sanious fluid, with marks of inflammation and supparation in the spinal cord, the substance of which was remarkably soft, and tending to dissolution.

"3. A young soldier, who had lately recovered from a petechial fever, was affected with pain in the dorsal vertebræ, difficulty of moving the lower extremities, suppression of urine, involuntary discharge of fæces, general debility, and emaciation. A variety of practice was employed for several months, without relief. The weakness of the lower extremities increased to complete paralysis; and soon after the superior extremities became affected in the same manner. He then lost his speech. After lying a fortnight in this state, completely immoveable and speechless, but in possession of his intellectual faculties, he died suddenly. On *dissection*, there was found no trace of disease in the brain, the thorax, or the abdomen. The spinal cord was inundated by a great quantity of sanious fluid. The cord itself was suppurated, dissolved, and disorganized, at the lower part of the dorsal region. Above this it preserved its natural figure, but was very soft. Its investing membranes, and the periosteum lining the canal of the vertebræ, were destroyed at the part where the cord was so much diseased; the vertebræ and their ligaments were sound.*

Our closing limits oblige us to pass hastily over our author's chapter on the developement of morbid tissues in the structure or coverings of the spinal marrow. These have been divided into two classes—namely, into *transformations*, as into bone or cartilage—and *new productions*, as tubercles and hydatids. These four alterations are the only ones which our author has been able to discover in the spinal marrow or membranes independant of those which we have already treated of in the foregoing pages. They are readily recognized in the dead body—but in the living it would, we think, be impossible to predict their existence. We shall therefore pass on to the last chapter of the work.

§ 9. *Diseases which depend, or are supposed to depend, on Affections of the Spinal Marrow, or its Coverings.* It was the opinion of Alexander of Tralles, that where paralysis affected *only the members*, without the senses of seeing, hearing, or the faculty of speech being troubled, the disease must necessarily have its seat in the spinal marrow. The same notion was entertained by Galen—but it is evidently too exclusive. Hoffman believed, that in *epilepsy* the membranes of the brain are affected, while in *convulsions* the coverings of the spinal marrow were interested. Hence, says he, in the *former* there is loss of sense, while in convulsions this is not necessarily the case. However this may be, we certainly often find disease of the spinal marrow in the bodies of epileptic patients. In ten individuals affected with this complaint, Esquirol found nine with disease of the medulla spinalis. In most of the cases there was softening of the organ in the lumbar region. In one case of chorea, Dr. Guersent found a softening of the lower third of the dorsal region; but our author had an opportunity of examining the body of a child, who had been affected with this complaint, and where the spinal marrow was perfectly healthy.

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* Edinburgh Journal, vol xiv. p. 46-7.

Not unfrequently, our author abserves, we find in the bodies of those who have died of tetanus an inflammation of the spinal marrow, or its envelopes; but, on the other hand, the most rigorous research often fails in discovering any such lesion. Nevertheless, the treatment should always point to this pathology, and such means be employed as tend to remove spinal arachnitis or myellitis. Brera, among others, is an advocate for this doctrine. He has frequently, he avers, found spinal inflammation in the bodies of tetanic patients. One of the cases is curious, and we shall give the particulars of it. A young man received a contusion of the thumb of the right hand, twelve days after which symptoms of tetanus supervened, and the disease was completely established. Being received into the hospital, M. Brera had 120 leeches applied along the spine. The spasms were greatly relieved; but afterwards they became augmented, paralysis took place, and the patient died. On dissection, the spinal marrow was unequivocally inflamed; and, what is curious, the inflammation was confined to the right side of the medulla spinalis—that on which the contusion had occurred.

Our brethren in this country are acquainted with the cases published by Dr. Reid of Dublin, and the plates of the state of the spinal marrow as found by him in tetanus and hydrophobia. There is reason to believe, that the trismus infantum is often dependent on Myellitis. Dr. Thompson of Philadelphia, recognized this state in a considerable number of instances; and Dr. Goëlis of Vienna, has frequently found the same thing in the Foundling Hospital of that city. In many cases of hydrophobia, the spinal marrow has been found inflamed, according to the testimony of Sallin, Clot, Troillet, Matthey, Hufeland, Reid, Dupuy and others. The editor of this Journal found it intensely inflamed, in a case which he dissected a few years ago at Portsmouth, and which was published by Mr. Webster, Surgeon of the 51st regiment, who called him in, in consultation. In many cases of fever, the spinal marrow has been found inflamed or its vessels congested, in the experience of M. Chaussier and Dr. Ollivier himself. The same has been corroborated by Dr. Sanders and Dr. Abercrombie of Edinburgh. We have every reason to believe, that a host of derangements in the functions of the thoracic and abdominal viscera are every day produced by slight affections of the spinal marrow, its coverings, or the nerves which emerge from it, whether arising from distortion, or idiopathic inflammation of the part.

We have now brought forward the amplest collections of pathological facts respecting this important and too much neglected portion of the nervous system, which is to be found in any journal, or, indeed any work in the English language. We have drawn information from many sources besides that of the work before us, and hope that this first article in our new series may prove a useful reference for the junior members, at least, of our profession. The able and industrious author of the work reviewed deserves great praise for the labour which he has bestowed on the subject—and to him we here tender the homage of our respect and esteem.

II.

An Engraved Representation of the Anatomy of the Human Ear, exhibiting, in one view, the External and Internal Parts of that Organ, in situ. Accompanied with a Plate of Outlines and References, with copious Explanations. To which are added, Surgical Remarks, &c. and a Synoptical Table of the Diseases of the Ear: the whole designed as a Guide to Acoustic Surgery. By THOMAS BUCHANAN, C.M. Licentiate of the University of Glasgow, &c. Hull, 1823, 12s. 6d. boards.

MR. BUCHANAN thinks that few, if any, of the many plates of the human ear, that have been published, give a correct representation of the relative situation of the parts. Those of the late Mr. Saunders are acknowledged to be the best; "but even these show only parts of the organ detached"

"Aware of the great defect in the best plates of the ear, and to form a model for my future dissection, I cut a cranium so as to admit of an oblique view from the temple to the tympanum; and with great care and perseverance was enabled to show the whole of the organ, both externally and internally, from this aspect, and in connexion with the surrounding parts." *Introduction.*

This attained, our author procured the head of an adult male, and after injection, he proceeded to form a preparation on the model of the cranium, from which, when finished, the drawing here represented was taken.

The first part of the work, containing three chapters, is dedicated to pure descriptive anatomy—and this we must, of course, pass over, with the remark that to us the descriptions appear to be correct. The second part of the volume, containing two chapters, contain surgical remarks on the introduction of the probe and catheter into the eustachian tube by the nostrils—and on the operation of puncturing the membrana tympani. To these we shall dedicate a few pages of our journal.

Cap. I.—Before a young surgeon attempts the introduction of a probe or catheter through the nostril or eustachian tube, Mr. B. advises him to make the experiment first on the dried preparation, and then, if possible, on the recent subject. When the probe is just entering the mouth of the tube, (on the dead subject) the surgeon should mark it slightly in a line with the tip of the nose, and from this mark measure off the length of the tube outwards, marking it also. These marks will be useful afterwards in operations on the living body. Probes should also be kept ready curved and marked—some for the right, some for the left ear, being of various assortments to suit the size of the patient's head.

"The great difficulty of introducing the probe into the eustachian tube through the nostril, is the excessive irritability of the Schneiderian membrane with which it is lined.

"To overcome the disagreeable sensation produced by the introduction of foreign substances, it might be advisable to inject tepid water into the nostril, and at the same time dip the probe into ol. amygd. warmed to the temperature of the blood.

"Having got the patient seated conveniently, introduce the probe into the nostril, and when you approach with the first mark towards the tip of the nose, cautiously endeavour to find the mouth of the tube, by directing the knob on the end of the probe outwards, and rather upwards, until it has entered the labia.

"Having entered the tube, observe the distance of the second mark, and proceed in the same cautious manner until it is in a line with the tip of the nose, and feeling no resistance made to the probe you may conclude that it has entered the tympanum.

"But beware of farther introduction; for by rashly pushing the probe into the tympanum, you might injure the mechanism of the ossicula auditus, which, besides putting your patient to great pain, would throw discredit on the operation.

"If you wish to inject tepid water into the tympanum, provide a slender silver catheter; which should not exceed in diameter from the point to the first mark, that of the diameter of the knob of the probe.

"It should gradually increase in size from the first mark, for about a quarter of an inch, in length, to the thickness of a crow quill, and then be of an equal diameter to the end. This equal portion of the catheter to be made with a male screw on the outside, to fit a round flat piece of silver with a female screw in its centre.

"This flat piece of silver, which has been called a frontlet, ought to have five or six holes in its edges, so that it may be secured in a proper position by means of a ribbon passed round the head and through two of the holes of the frontlet, the ends of the ribbon to be then brought backwards and tie behind.

"If the end of the catheter were made to fit the little silver syringe used in Fistula Lachrymalis, it would be both useful and economical.

"Introduce the catheter in the same manner as the probe, and when the point has entered about half an inch into the tube, screw on the frontlet close to the tip of the nose; fasten it with the ribbon, and then inject the water through it with the syringe. The water used ought to be distilled, and by this means the pus or mucus in the Tympanum, will be held in solution, and be more easily evacuated than when precipitation takes place. It ought likewise to be heated to 94° Fahrenheit, but if a thermometer cannot be conveniently got, dip the hand into the water, and its temperature may be easily judged by the sensation produced on the back of the hand.

"After the operation a saline purgative ought to be given, and if considerable irritation arise, venesection with antiphlogistic regimen to be prescribed; and the patient confined to his room until all symptoms of inflammation have been subdued." 31.

If, from some cause or other, the operation should not succeed, and there is reason to suppose that the closure of the tube is not permanent, but merely from tumefaction or stricture of the parts, arising from recent exposure to cold, the patient should be bled with leeches near the mastoid processes—take sulphate of magnesia in small doses, and afterwards be put on an alterative course, with blisters behind the ears. By perseverance in this course, the tumefaction will decrease—the probe may again be tried; and, if adhesion has not taken place to almost the length of the tube, it may, with care, be rendered pervious.

CHAP. II.—ON PUNCTURING THE MEMBRANA TYMPANI.

Our author supposes that the attempts to introduce the probe into the eustachian tube had repeatedly failed—that the patient is unable to inflate the membrana tympani—and remains deaf, or nearly so. The operation of puncturing the membrana tympani is then admissible.

"For this purpose the surgeon ought to have an instrument (which I have called a perforator) of the following description:—

"The blade to be about three inches in length, of a quadrangular shape for about a quarter of an inch near the point; the other parts of the blade round, and increasing a little in thickness.

"The sides of the quadrangular part to be ground equally and brought to a point; the shoulders of the edge, as they are called, to taper gradually, so as to be rather more than a line in length. The diameter of the quadrangular part should not exceed one fourth part of a line, but the rest of the blade, especially near its insertion into the handle, to be about two thirds of a line in diameter.

"The handle to be octagonal, and made of mahogany stained black; about four inches in length, one line and a half in diameter near the blade, and increasing in thickness to about one line and two-thirds in diameter at the end.

"If the blade were shorter the handle would require to be proportionably advanced towards the Meatus, which would almost block up the tube, or at least obscure the view of the Membrane, so that the surgeon would have to operate under considerable disadvantages; whereas, when the blade is of the above length, it will be in his power to observe the progress of the point of the perforator, and to act accordingly.

"A room with a window fronting the south should be chosen for the place of operation; and the patient placed on a low seat, so that the rays of the sun may fall into the Meatus.

"The Manubrium or handle of the Malleus will then be distinctly seen pointing downwards and inwards; occupying the superior half of the Membrana Tympani.

"The surgeon being seated on a high chair, should lay his left hand on the head of the patient,* and with the right take hold of the instrument in the same manner as he would a pen when writing; he should then, cautiously and steadily, enter the point of the perforator into the Membrana Tympani, about half-way between the centre and its lower edge, and with the thumb and index finger give the instument half a turn one way, and then half a turn the other, and in this manner gently push the point about a line through the Membrane.

"The operation will be performed with greater precision if the surgeon bring the thumb and index finger of his left hand nearly over the Meatus, and slightly grasp the perforator about the middle of the blade; by this means the point of the instrument will be kept steady, that is to say, from describing a circular evolution during the rotatory motion necessary to *this mode* of puncturing the Membrana Tympani.*

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* "The head of the patient ought likewise to be secured by an assistant."

After this operation, our author recommends a saline purgative; and, if painful sensations are felt in the parts, venesection should be performed, confining the patient to his room, and keeping him on the most antiphlogistic regimen until the inflammatory symptoms are subdued, and the parts restored to healthy action.

Our author observes, that the *mode* of operating, in these cases, has been considered of little consequence, it being thought sufficient to introduce a sharp-pointed instrument through the membrana tympani, taking care to avoid injuring the ossicula auctitus. Mr. B. remarks that, from time to time, the deafness returns, requiring another and another operation, till, often, the membrana tympani is injured for ever. On examining the structure of this part, we find it of an oval shape, and muscular—the fibres running in a peculiar direction—from the circumference to the centre.

"Hence it is, that when the operator thought he was *cutting*, he was only *separating* the fibres by the mechanical power of the instrument; and that the union which took place afterwards, was an effort of nature to restore the fibres to their original position and tone. To render this still more plain, let the muscle of a living animal be laid bare, and an incision made into it, in the direction of the fibres; and the parts afterwards left to nature.

"Adhesion will take place in almost every instance. But let a muscle in a similar situation be cut across, and the fibres will immediately *retract* to an extent corresponding to the size of the wound.

"The peculiarity of the mode of operation which I would recommend, is, to *drill* the perforation, and by means of the quadrangular point of the Perforator the fibres of the Membrana Tympani will be *cut across*—

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* "If any objections are offered to this mode of operation, as being too complex and difficult to execute, owing to the unsteadiness of patients in general. The surgeon might then have a Perforator made of the same length and thickness as the above, but spear pointed, similar to a lancet; the shoulders not to exceed one fortieth of an inch in breadth; the handle ivory, with two or three black spots inserted, corresponding to the flat sides of the instrument. The operation might then be performed by a simple puncture, by the surgeon keeping the flat side of the Perforator opposite to the centre of the Membrana Tympani when he operates, and by this means the fibres will be cut across; but there will be more risk of the closure of the puncture than in the mode described above."

retraction take place—the wound assume an oval figure, and there will be less danger of a union of the parts taking place than the common mode of operating by a simple puncture.*

"It is for this reason I have been so particular in describing the Perforator and the manner of using it, in order that an operation the mode of which has hitherto been accounted of little or no moment, but which is of the utmost importance to the Patient,—should be performed in a manner agreeable to the *true* principles of Surgery."

We have now given a full account of the operative part of the work before us, (with the exception of the synoptical table) as far as the typography is concerned. The plate must be examined in the original, which, we have no doubt, will meet a favourable reception among those concerned in aural practice, if not among the surgical profession at large.

III.

NEW REMEDIES.

1. *Formulary for the Preparation and Mode of employing several new Remedies*, &c. Translated from the French of M. Magendie, by T. C. Haden, with an Introduction and Notes. Small Octavo, pp. 110. London, 1823.
2. *On the comparative Virtues of different Kinds of Sarsaparilla. To which is added, an Appendix on Cinchonine, Quinine, and other new Vegetable Principles.* By Mr. John Pope, Chemist. Octavo, pp. 21. London. 1824.

Although we are not so sanguine in our expectations respecting new remedies as either Dr. Magendie or his translator, Mr. Haden, yet we are very far from discountenancing the pursuit of novelty in our therapeutical agents, convinced, as we are, that new and powerful remedies will continue to be elicited in every age to the end of time. The field for discovery is boundless—the materials inexhaustible—the inducements preponderating.

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* "I have in several cases introduced the Probe through the Nostril and Eustachian Tube into the Tympanum, in the manner described in Chap. I. and likewise Punctured the Membrana Tympani with a quadrangular Perforator similar to the above, with success. The patient belonged to the Hull Dispensary for Diseases of the Eye and Ear.

"I intend to lay the history of these cases before the public at some future opportunity."

Under such circumstances, and with the aid of a rapidly improving chemical science, what may not be expected from the restless activity of man? There is no good, it is true, without alloy. The same process which evolves the active principles of vegetables, swells the long list of poisons, by which the assassin destroys his victim and the suicide himself! Thus, of all the poisons which the ingenuity or the villainy of man has ever invented, what is so rapidly destructive of human life as prussic acid? In a proper dose, death and deglutition are simultaneous—and the suicide rids himself of existence without a pang, without a consciousness of the awful transition from time to eternity. We have no doubt that this substance will, ere long, be almost the only instrument of *self-destruction*. We have reason to believe that it has been used, most effectually, for this purpose already by a medical man in this metropolis. The late judicial proceedings in Paris, on Dr. Castaing's case, show that some of the new remedies have been applied to the horrible purpose of murder. But, perhaps, of all substances the strychnine will prove the most dangerous in the hands of the assassin, since the diffusible odour of prussic acid will almost always confine it to the hands of the suicide. The *sixteenth part of a grain* of strychnine will kill a small dog! What a tremendous agent in medicine or toxicology!

Mr. Haden, in his translation, adverts to the objection which has been made to the principle of isolating and concentrating the active parts of medicines, as rendering them less efficacious than when presented to us by the hand of Nature. We perfectly agree with our author, that these active principles of medicinal substances should be looked upon as *simples*, the properties and doses of which are to be ascertained by experience, in the same way as was done with all other remedies. In this point of view, we are likely to derive great advantage from the use of remedies concentrated, and freed from their nauseous and often jarring principles. In many diseases, climates, and individuals, the stomach will not bear medicines of bulk, as the cinchona for instance, and in such cases the new remedies will be of the greatest importance. And even granting that the original properties of drugs should be entirely altered by these new analyses, still we are gainers by all the new properties developed, as we have, after all, the choice of both forms. In respect to bark, it is now clearly ascertained that the quinine and cinchonine are of great importance in medicine, and we have no doubt but that they will be advantageously employed in numerous diseases where the bark in substance would be totally inadmissible.

The expense of preparing the new medicines has been urged as an objection; but a few shillings are of very little consequence compared with life or health. And we have no doubt that the processes will yet be much simplified so as to enable the operative chemist to furnish the practitioner with the said remedies at a much lower rate than at present.

In the following notice of the publications now before us, we shall enter very little into the chemical or pharmaceutical processes employed in the preparation of the new remedies, but dwell principally on their physiological or medicinal effects. Few of our readers will venture to prepare the remedies in question, but many of them will wish to employ them in practice, when procured from the operative chemist.

I. *Resin of the Nux Vomica.*—So far back as 1809, M. Magendie ascertained that an entire class of vegetables (the bitter strichnos) has the singular property of powerfully exciting the spinal marrow, without involving, except indirectly, the functions of the brain. The alcoholic extract of the nux vomica has since been frequently employed in both partial and general paralysis, but the actual degree of success has not yet been ascertained. The preparation is easily made by exhausting, by repeated macerations, a determinate quantity of rasped nux vomica, in alcohol, and evaporating it slowly to the consistence of an extract. The dry extract may be made by dissolving in water the alcoholic, and evaporating to dryness. The dose of the resinous extract is, from half a grain to three grains in pills. It possesses the same properties, as the strychnine, but is much more manageable.

II. *Strychnine.*—In the nux vomica, the bean of St. Ignatius, and the celebrated poison of Java, there is a peculiar vegetable alkali termed strychnine, one of the most virulent poisons in nature, as we have before said. It is soluble in water slightly acidulated, and so intensely bitter, that it is decidedly perceptible when dilued in *sixty thousand* times its own weight of water. We tasted the strychnine itself, as prepared by Mr. Pope, and felt unwell after merely applying a particle of the salt to the tip of the tongue. "I have witnessed," says Mr. Pope, "the sixteenth part of a grain paralyze small dogs in four or five minutes, and kill them in less than half an hour." Its action is peculiar and uniform, paralyzing invariably the hinder extremities.

III. *Morphine and Salts of Morphine.*—In morphine, we have exclusively the anodyne or sedative property of opium. It is obtained by a troublesome process in small regular crystals, but little soluble in water, except with a slight excess of acid.

> "The acetate of Morphine," says Mr. Pope, "is the combination of this substance, most universally approved;* it is a very deliquescent salt, and may be exhibited in any aqueous fluid, in doses of from one-fourth of a grain to one grain, or formed into a pill with liquorice powder, treacle, &c. I have adopted a very simple method for separating these principles of opium for pharmaceutial purposes, by treating it repeatedly with sulphuric æther, and subsequently forming it, by solution in distilled water and evaporation in vacuo, to the consistence of an extract. This preparation, which I distinguish as '*Extract of Morphia*,'† may be uniformly substituted for the ordinary *extractum opii*, and the dose of it considerably augmented, without producing nausea, restlessness, &c." 18.

The acetate of morphine is prepared by Magendie, by combining directly, in an evaporating dish, acetic acid and morphine, letting the mixture slowly evaporate to dryness.

Narcotine contains solely the stimulating property of opium. In its pure state, a few grains of it are destructive of animal life. It has not yet been employed in medicine.

IV. *Emetine.*—Helletier and Magendie, about six years ago, ascertained that the different species of ipecacuan owed their emetic properties to a particular immediate principle, which they denominated *emetine.* This substance is much more active than the root itself—is devoid of diragreeable taste, or nauseous odour—and may, they think, be advantageously substituted for ipecacuan on all occasions. The *pure emetine* is a new vegetable alkali, white, pulverisable, unaltered by the air, scarcely soluble in water, but easily so in ether or alcohol. Its taste is slightly bitter—it is soluble in all the acids, resembling veratrine by forming with them a crystallizable combination. Its action is similar to that of the impure, or coloured emetine, but much stronger—two grains of it being sufficient to destroy a large dog. One sixteenth of a grain of it produced vomiting in a man of 85 years of age. To operate in this manner, one grain, or rather less, dissolved in acetic or sulphuric acid, may be given in a draught, in divided doses till the effect is produced.

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* "The liquor opii sedativus is chiefly an aqueous solution of acetate of morphine in combination with a portion of extraneous coloring matter, and a little alcohol." This is conjecture. For proof, see Mr. Battley's paper in the *Extra Limites* of this Number.—*Ed.*

† "Extractum opii sine narcotinâ would be more correct; but the other is more convenient in prescription."

V. ***Alkalis of Cinchona.***—Pelletier and Caventou discovered an alkaline substance in bark, which they denominated *cinchonine.* This they obtained by operating on the grey cinchona (cinchona condaminea.) The yellow bark (cordifolia) furnished an alkali which differed considerably from the cinchonine, and to which they gave the name of *quinine.* Next followed the analysis of the red bark, (c. oblongifolia) which furnished cinchonine in triple the quantity yielded by the grey bark, and double the quantity of the quinine furnished by the yellow bark. Farther experiments on a large scale, have shown that quinine and cinchonine exist simultaneously; but the cinchonine is, relatively to the quinine, in gerater quantity in the grey bark; whilst, in the yellow bark, the quinine so predominates, that the presence of the cinchonine might readily escape notice. We shall give the most recent formula for obtaining both these celebrated salts.

"Boil the bark in alcohol until it loses all its bitterness; evaporate to dryness in a water bath; dissolve the alcoholic extract entirely in boiling water, strongly acidulated with hydrochloric acid; add an excess of calcined magnesia, which, after boiling some minutes, will fix all the red colouring matter, and make the liquid clear. When cold, filtrate and wash the magnesian precipitate with cold water; dry it on a stove; separate all the bitterness by repeated digestions in boiling alcohol; mix the alcoholic liquors, and the cinchonine will crystallize as the fluid cools. The cinchonine, which is thus obtained, still contains a green fatty matter, which may be separated by solution in a very weak acid. If the acid be too strong, it will dissolve a part of the fatty matter, and the intended object will be thus defeated.

"Quinine may be obtained from the yellow bark by a similar process to the one described above." 45.

Cinchonine is white, translucent, crystallizable in needles, and soluble in 700 parts of cold water. If dissolved in alcohol, or rather in an acid, it tastes powerfully bitter, and exactly resembles that of the pale bark. The sulphate and acetate of cinchonine are used in medicine. The first is very soluble in water—the second is much less so, but an excess of acid dissolves it with tolerable facility.

QUININE is white and uncrystallizable—it is as little soluble in water as the cinchonine, and is much more bitter to the taste. It is very soluble in ether, while cinchonine is very little so.

Sulphate of Quinine.—M. Henry, jun. has lately made known, an expeditious and cheap process for directly obtaining the sulphate of quinine.

"He digests repeatedly, in hot water acidulated by sulphuric acid (6 or 8 grammes [gr. 92.66 or gr. 123.55 T.] to each kilogramme [oz. 32.17 T.] of distilled water) He blanches the liquors by means of hot lime, and washes the precipitate to separate the excess of lime. He repeatedly digests this precipitate, when well drained, in alcohol at 36° (.837.) He then obtains, by distillation, a brown viscid matter, which becomes brittle when cold, and is very bitter. He digests it in hot water, acidulated by sulphuric acid, and the liquor, when cold, gives perfect crystals of pure sulphate of quinine. He has not succeeded so well in extracting the sulphate of cinchonine from the grey bark by this mode of preparation.

"The sulphate of quinine obtained in this way, is in the form of white crystals, which are entirely soluble in water; little so, however, in cold water, but more so in boiling, and especially in weakly acidulated water."* 48.

Acetate of Quinine.—The characteristic of this salt is the great facility with which it cryitallizes. It is little soluble in cold, even with an excess of acid.

Physiological Action of the Salts of Bark.—A considerable number of experiments have now been made to determine the medical or physiological effects of these medicines, and it is well ascertained, that they possess the properties of the cinchonas, and, consequently, that they may, in almost all cases, be substituted for them. It is, in the first place, desirable to ascertain the precise dose of all active remedies, and this is done better with the alkalis in question, than with the bark from which they are obtained, and in which they exist in different quantities according to the state of the bark. In the second place, it is often, we might say always, desirable to administer medicines in a small volume and agreeable form. In these respects the salts possess great advantages. Chemistry, therefore, has done much service to medicine, by separating the active principles of vegetables from the inert substances with which they are combined in a natural state.

The sulphates of quinine and cinchonine may be given in doses varying from one to ten grains in the 24 hours. Some have carried the dose much higher, but this is seldom necessary. Large doses, indeed, have produced inconvenience, if not danger, giving rise to strong cerebral excitement. A wine or tincture of the sulphate of quinine may be made thus:—Sulphate of quinine, 10 grains; Madeira wine, two pints. The tincture—sulphate of quinine, five grains; alcohol, one ounce.

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* "Dr. Paris gives the above process with some variation. He directs two pounds of the powdered bark to be boiled for half an hour in sixteen pints of distilled water, acidulated with two fluid ounces of sulphuric acid. The quantity of lime recommended is half a pound, or enough to render the solution of a dark brown, and to produce a reddish brown precipitate. He says that the two pounds yield ʒv. or ʒvi. of the sulphate; 8 grains being equivalent to an ounce of bark.—Tr."

The cinchonine, while it is much dearer, is not so efficient as the quinine, and, therefore, we shall not dwell on it in this place.

VI. *Veratrine.*—This active substance has been found in the veratrum sabadilla, the colchicum autumnale, and in the common white helebore. It is scarcely soluble in cold water, and requires a thousand times its weight of boiling water for its solution. It is very soluble in ether, and still more so in alcohol. It is insoluble in the alkalis, but soluble in all the vegetable acids which it saturates, forming with them uncrystallizable salts, taking the appearance of gum on evaporation.

Physiological Action on Animals—One or two grains of the acetate of veratrine introduced into the gullet of a dog produces, immediately, abundant salivation, which continues for some time.

> "If a small quantity be thrown into any part of the intestinal canal, and the body be opened to observe the effects, the intestine is found to become much indurated, and to relax and contract alternately for a certain time. The part of the mucous membrane which comes in contact with the veratrine is inflamed; the irritation spreads, and vomiting and purging are produced. In a much larger dose the substance induces a very great acceleration of the circulation and of respiration, which is soon followed by tetanus and death." 60.

In a note, in this place, Mr. Haden states, that colchicum, when given in too large a dose, induces always inflammation of the mucous membrane of the bowels. He, also, gives the following fatal case of gout, from an over-dose of tincture of colchicum.

> "Mrs. ——, aged forty, after frequently suffering from gout, requested her medical man to give her the colchicum in a very severe fit.
>
> "She took ʒiiss. of a tincture made by infusing ℥iv. of the root in ℥viij. of proof spirit for three days, the mixture being kept at nearly 100° of temperature. This was given in the morning of Dec. 5. In the evening it had produced no effect, except slight qualmishness. Calomel gr. iij. opii gr. i. was ordered at bed-time, and a purging draught for the morning. However, in the night, vomiting and purging commenced, and continued all the next day, in spite of effervescing volatile saline draughts with opium; so that in the evening of the 6th, opii gr. i. camphor gr. iii. were given and repeated in two hours.

"On the 7th, from accident, she was not seen till three *p. m.* when she was found in the collapse preceding death. The gout had previously gradually subsided. It was stated that she became faint at two o'clock *p. m.* and not till then were her friends alarmed. By opium and spirits warmth was reinduced upon the extremities, and a feeling of greater comfort produced; but the pulse never completely recovered, although the sickness was completely subdued; so that at ten *p. m.* she fell into an apoplectic kind of sleep, which terminated in death before morning.

"It is peculiar, in this case, that Mrs.—— was delicate, and some years before had nearly suffered death from incessant vomiting attended by cold extremities; it was relieved by inducing gout on the swelled kned by mustard cataplasms, In the fatal attack the sinapism was applied, with the effect of producing great pain, but without inflammation or heat of skin.

"It should be mentioned also, that this female's mother is exceedingly susceptible of the action of colchicum, in even very small doses. The attendant practitioner begged also to add, that he only prescribed so large a dose as ʒiiss. because the tincture had only been made three days, and the formula directed it should be infused a fortnight." 63.

When we bear in mind that retroceded gout often produces all the phenomena enumerated in the above case, and where no colchicum is given, we really can see no unequivocal proof of the medicine being the cause of death in this case. At the same time we are very far from advocating such huge doses as two drachms and a half of tincture of colchicum under any circumstances.

Veratrine has not been used in the human subject in large doses. A quarter of a grain rapidly induces very abundant alvine evacuations, and if the dose be augmented it occasions more or less violent vomiting. M. Magendie lately gave it in the dose of two grains in the 24 hours, without producing too many alvine evacuations.

VII. *Hydrocyanic Acid.*—This medicine is now so well known as nearly to be forgotten in this country. We shall therefore take no notice of it in this place.

Passing over solanine and delphine, the former an alkali obtained from the berries of deadly nightshade; and the latter a salt from the seeds of stavesácre, we come to—

VIII. GENTIANIN—For the process of making this, we refer to the work itself, which all operative chemists and apothecaries will, of course, possess. We shall merely glance at the properties of the new remedies. Gentianin is yellow, inodorous, and possesses very strongly the aromatic bitterness of gentian, espepecially when dissolved in an acid. It appears to have no poisonous quality—and, as far as we can see in Magendie's work, it possesses little, if any, advantage over the root from whence it is obtained by a troublesome process.

IX. *Iodine* —This is a simple body, discovered in 1813, in the mother waters of soda, as it is obtained from sea-weed. It is solid at the ordinary temperature, in the form of small greyish crystals, having the aspect of plumbago. It is soluble in ether and in spirit of wine. It forms an acid with hydrogen, and another with oxygen. Hydriodic acid may be united to a number of bases, forming neutral salts with them, of which the hydriodate of potash has been that most commonly employed in medicine. M. Coindet, of Geneva, was one of the first who employed it extensively, and, as we said in a former number of this Journal, he has entirely desisted from its internal administration. Externally applied in the form of an ointment, it is one of the most powerful remedies we possess for discussing scrofulous and other glandular tumours.*

X. *Brucine.*—This salt was discovered in the bark of the false angustura bark (brucia anti-dysenterica) by Messrs. Pelletier and Caventou in 1819. It has since been found combined with strychnine in the nux vomica. It is extracted from the bark by a process similar to that by which the strychnine is obtained. It is intensely bitter, and little soluble in water. It presents itself under the form of oblique prisms with parallelogrammic sides. It unites with acids, forming with them neutral salts. Its action on the animal economy is similar to that of strychnine, but less energetic. It requires four grains of brucine to kill a rabbit. It might be substituted, thinks M. Magendie, for strychnine, with advantage.

We cannot better conclude our notice of this useful little work than in the words of the translator.

> "Time alone can pronounce definitively on the advantages and inconveniences of these new remedies; but which ever way it may be, the following pages may be useful by teaching the mode of preparing them without making it necessary to consult general treatises of chemistry or

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* FORM OF OINTMENT.

℞.	Hydriod. Potassæ . . .	℈ij.
	Axungiæ	℥iss.
	Liq. Potass. Caust. . .	gtt. iv.
	Ft. unguentum.	

pharmacy, and by giving medical men every facility in submitting them to personal experience which is often after all the only really profitable course."—*Preface* xi.

Since the above analysis was closed, we have learned with regret, though not with surprise, that the zealous and intelligent translator has paid the debt of Nature, while in the Mediterranean with Sir William Curtis, as that gentleman's medical attendant. We saw Mr. Haden a few days before he embarked, and he evidently laboured under aneurism of some of the large vessels in the chest—or some tumour pressing on the lower part of the trachea, or about the bifurcation of the same into the bronchia. His *inspirations* were long and laborious, as if the air was drawn with difficulty through a flattened tube. The breathing was, also, accompanied by a peculiar hissing noise, indicative of the obstructed canal through which it passed. Mr. H. had long laboured under painful sensations in the region of the arteria innominata or subclavian of the right side, and his medical friends had long suspected aneurism in that neighbourhood. Their prognosis was, doubtless, but too soon verified. Mr. Haden always appeared to us to be a man of great zeal, considerable talent, and scrupulously upright character. His attachments, however, of a friendly and medical nature, appeared to us rather romantic. His enthusiastic admiration of every thing French, after spending a few weeks in Paris, rendered his writings, from that period, quite tiresome, and detracted somewhat from the estimate which had been previously formed of his judgment. While we notice this little failing of the head, we are ready to do ample justice to the goodness and integrity of his heart.

P. S. Before we dismiss the subject of New Remedies, we may be permitted to say a few words respecting New Pharmacopœias, of which a whole host will have appeared ere these sheets can see the light. The note of preparation, during the last two years, never induced us to form extravagant anticipations of the Official Pharmacopœia of the College, and, therefore, we experienced no poignant disappointment at is appearance. This has evidently not been the case with others. We have long been of opinion, that the conjoint work of *many* heads can never be equal to the offspring of *one* good one. In the conclaves or councils of public bodies there must ever be too much clashing of opinion and difference of sentiment (especially on medical subjects) to prevent the ejection of some good, and the introduction of some evil, into their resolutions. These embarrassments must, consequently, render the compositions emanating from such bodies below the level of public expectation. We shall illustrate this by a naval paradox. If ten of the *fastest* sailing frigates in the royal navy be ordered to proceed with all possible dispatch from Spithead to Madras, *as a squadron*—and if, at the same time, the *slowest* sailing frigate in the navy be ordered to procoed *as a single ship*, she will be at Madras many days, and probably some weeks, before the fast sailing squadron. And Why? Because no two ships sail exactly alike, and, therefore, there is such continual backing, filling, trimming, and manœuvring *in the squadron*, that the single ship, however slow in sailing compared with any *one* of the others, outstrips them all in the long run. How far this simile is applicable to the present subject, let the National Parmacopœias of France and England bear testimony. In the mean time, while we consider a general standard in the preparation of medicines a very proper thing, we attach far less importance to it than our neighbours. Whether the College execute ill or well their pharmacopœia, the circumstance will neither accelerate nor retard the march of Science. Who, we ask, will prescribe *garlic*, because it has a seat in the pharmacopœia—and reject the *sulphate of quinine*, because it is thought unworthy of a place with the fetid hellebore, madder, and various other sleeping partners of the great firm?

The two National Pharmacopœias of France and England have run into opposite extremes. The former is a chaos, a *rudis indigestaque moles*, of all kinds of unutterable things. The latter has acted with, perhaps, too much caution, both in expulsion and admission. This extreme, however, is infinitely preferable to the other—in fact, we hardly consider it deserving of censure.

While the birth of the New Pharmacopœia has drawn forth a general note of lamentation from our cotemporaries, we confess that it has had quite a contrary effect upon us. We could not but be amused at the tiptoe expectation evinced among the host of critics, commentators, and counsellors—nor could we resist the temptation to laugh at their long blank countenances, when they saw their criticisms, comments, and friendly advice thrown away! One of two things is certain: either the voice of the critics never penetrated the sanactum sanctorum of the College—or, if it did, it was there stricken as mute as the marble busts of Harvey and Sydenham.

The additions and subtractions in the new edition are far from numerous. Into the Materia Medica six new articles have been admitted—cubebs, elecampane root, the garden lettuce, seeds and leayes of strammonium, oil of croton, and rhatany root. The *seeds*, also, of conium, colchicum, and digitalis, are now admitted. Two drugs have disappeared from this department—aloe vulgaris and vinum album Hispanicum. Some alterations and improvements have taken place in the department "*Preparata et Composita*," but only one single formula has been thrown out, the oxydum antimonii. The other changes are few in number, and of no very peculiar interest. But, as critical commentaries are issuing from the press in great numbers, some of which it will be our duty to notice hereafter, we shall dwell no longer on the subject. We think the College has pruned with a rather too sparing hand, and that they might have admitted a few formulæ, now extemporaneously employed, which might have advantageously supplied the places of those which they could have thrown out. But, as we said before, they have acted on the side of caution, and, consequently, of safety. We cannot, therefore, join in the hue and cry against the New Pharmacopœia.

IV.

Practical Observations in Surgery. By HENRY EARLE, F.L.S. Assistant Surgeon to St. Bartholomew's Hospital, and Surgeon to the Foundling. Octavo, pp. 230. Underwoods, 1823.

IN our Number (15) for December last, we were only able to take up the litigated question of "*union or non-union*" of the neck of the femur within the capsular ligament. We were then obliged to pass over the other subjects treated of in Mr. Earle's volume. We now return to the work in question, in order to make our readers more particularly acquainted with its contents.

At page 102 of Mr. Earle's work, this ingenious surgeon gives up discussion, and proceeds to the treatment of fractures at the upper part of the thigh-bone. He remarks, that the treatment of fracture, whether within or external to the capsula, is the same as in any other fracture—namely, to reduce the limb to its proper length, to adapt the broken surfaces together, and to maintain them so. This rule is easy in theory, but difficult in practice. Thus, where the neck of the femur is broken, no lateral pressure can have any effect in restraining the motion of the broken bones; nor is it possible to place any splint sufficiently high on the inside of the limb to have any direct control over the fracture. Another difficulty arises from the head of the bone being so connected with the pelvis as to partake of every motion of the trunk—the consequence of which must be the continual disturbance of the broken bones.

> "In treating these cases, it is essential to consider them as if the fracture existed between the pelvis and thigh; and so to connect the two that they become like one body, and move together. The other indications are to keep up moderate permanent extension, and to take care that the limb is in every respect in its proper relative situation, not only as to length but direction." 103.

Mr. Earle makes some pertinent remarks on the modes of treatment in most common use at the present day, beginning with that of Pott. We agree with our ingenious author, that the idea of relaxing *all* the muscles of a limb, by position, is perfectly visionary. The most powerful muscles however, may he relaxed—or rather the longest, and, consequently, those most likely to exert a deleterious influence over the fracture, and most disposed to spasmodic contraction.

> "I must confess that it has ever appeared to me that too much strses has been laid upon this action of muscles; and I cannot but think that, if they were the sole agents in displacing a fracture, it would be very immaterial in what position a limb was placed. To me it appears that the displacement of a fractured thigh depends, in the first instance, on the direction and continued operation of the force which causes the breach of continuity; or on the superincumbent weight of the trunk and pelvis; or on the injudicious mode in which a patient is removed after the receipt of an accident; or on some subsequent exertion, in attempting to use the limb or alter the position from that in which he fell. The muscles are but secondary agents: the broken spicula of bone, by lacerating them, render them irritable; they act spasmodically, and are no longer under the control of the will. When thus excited, they forcibly retain the bone in its wrong situation, and by their action considerably add to the deformity." 106.

This action of the muscles, Mr. Earle observes, is easily overcome by soothing the agitation into which they are thrown, by gently extending the limb, and restoring the broken bone as nearly as possible to its proper situation. By these means, the muscles will lose the disposition to retract the limb in 24 or 48 hours.

Mr. Earle avers, that he has never seen a case treated in the side position of Pott unattended with considerable lameness and eversion of the foot.

> "The objections to this plan are, I think, manifold. In the first place the great difficulty, I will add almost impossibility, on a common hospital bed, of retaining a patient permanently on the side, is a very

serious objection; and the slightest deviation from it causes the pelvis to gravitate, and turn more or less supine; carrying with it the upper portion of bone; the effect of this must be a permanent eversion of the leg and foot. But I will suppose that great care has been taken in preparing the bed, and every precaution used to keep the patient with the pelvis in the position above described; still, in fractures of the neck, or at the root of the trochanter, the whole weight of the pelvis resting upon the broken part, and bruised integuments, causes the most insufferable pain, and in old emaciated persons would soon produce gangrene; and should the broken surfaces not exactly correspond, all these evils would be increased tenfold." 108.

To these objections, Mr. Earle urges in addition, the irksomeness of the position, which cannot be varied—the loss of the use of the arm on the affected side—the want of any power to counteract the retraction of the limb—and the great difficulty of comparing the limbs together, to ascertain their lengths.

The straight or extended position, in fractures of the thighbone, is that which is usually employed on the Continent—and by several practitioners in this country. The object of all machines or apparatus for effecting this, is the same:—"to connect the thigh firmly with the pelvis, and keep up permanent extension of the broken limb." Mr. Earle has tried, or seen tried, all these contrivances, and thinks them liable to many and serious objections.

"In the first place, the perfectly supine position which is required to restrain the tendency of the body and pelvis to sink to the lower part of the bed, is irksome and unfavourable to the taking food, and still more so the expulsion of the fæces and urine. In several cases I have known the employment of the catheter necessary both in the male and female; and very painful retention of urine, with all its distressing attendants, has been the consequence of neglect.

"In removing the fæces, more or less motion must be given to the pelvis; and as the other limb is left at liberty, there will, in all cases, be more or less power of moving the pelvis as the bandages become loosened; and consequently the upper portion of the fracture will be liable to be displaced, which cannot but be unfavourable to bony union.

"The prodigious number of bandages in Desault's apparatus is productive of great trouble and inconvenience. The pressure which, in all the modifications of the long splint, is made across the groin causes great œdema of the whole limb, in consequence of the obstruction which is afforded to the circulation in the inguinal veins and absorbents. The bandages at the upper and inner part of the thigh are so liable to become soiled and wetted, particularly in the female, that distressing excoriation and ulceration, succeeded by enlargement of the glands, are by no means unfrequent consequences. But all these objections, by great care and assiduity on the part of the surgeon, may be counteracted, and in some measure obviated. There are, however, other objections, which have not hitherto met with the attention they merit, but which, I am confident, have, in many instances, contributed to retard the recovery, and produce permanent deformity, not only in fractures of the neck, but likewise of the shaft of the bone.

"In the application of the long splint, the two principal points of bearing are at the foot, and at the tuberosity and ramus of the ischium. Between these two parts the limb may be extended; and, by comparison with the other limb, the length of the two may appear exactly equal, and the surgeon may flatter himself that the broken bones are in perfect coaptation; but there is another very important circumstance to attend to, namely, the direction of the bone. This has been already pointed out in the anatomical description, where the great obliquity of the shaft of the bone, particularly in the female, has been dwelt upon.

"In Desault's apparatus, and, indeed, in all the applications of the long splint, the limb is bound to a perfectly straight body, which is placed at the outside of the thigh, and considerable pressure is made on the inner side of the knee; which, in fractures of the shaft of the bone, tends to destroy the natural obliquity of that part, and bring it more into a straight line, which is not only destructive to the symmetry of the limbs, but impedes progression, and renders the erect posture less secure.

"In fractures of the neck of the bone, pressure applied in the same direction will separate the lower edges of the fracture, and thus materially increase the difficulty of union. The forcible pressure from within outwards, which is made at the point of extension at the upper and inner part of the thigh, will often separate the broken portions of bone. The straight position is also objectionable, with reference to the arched form of the thigh; for I conceive it must be self-evident, if we take an arched and oblique body, in which there exists any breach of continuity, and attempt to forcibly confine it to a straight unyielding plane, that more or less displacement in the proper relative situation of the different parts must be the consequence. It is true, that, by the employment of graduated pads, the natural direction of the thigh-bone may be preserved; but this precaution is nowhere inculcated, and I have never seen it attended to." 113.

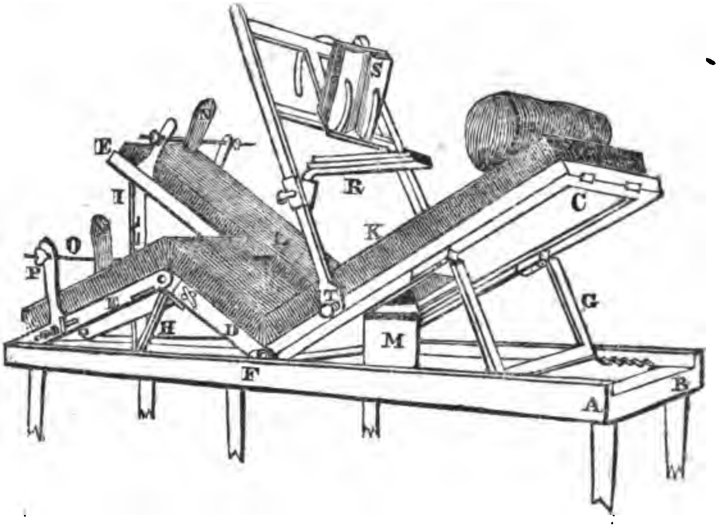
Of all the instruments which our author has seen, he thinks the one proposed by Mr Hagedorn the least liable to objection. It is described in Cooper's First Lines of Surgery, p. 430. If there was superadded any simple contrivance for removing the fæces, without, in any degree, moving the pelvis, Mr. Earle would consider Hagedorn's apparatus as perfectly adapted to fulfil all the ends proposed. In this respect, however, it is defective.

There is one case of fracture, namely, just below the trochanter minor, where the psoas magnus and iliacus internus muscles often draw up, so forcibly, the upper portion towards the groin, as to cause a very evident projection at that part. If the bone should unite in that position, lameness and deformity would be the consequence. "In this case, it is necessary to bend the thight very much on the pelvis, almost to a sitting posture, to facilitate the approximation of the broken ends of the bone. Any attempt to employ the extended position under any modification would be nearly certain of failure, unless the spasmodic action of the psoas and iliacus could be effectually overcome, and the bone replaced in its situation, which would be very difficult to accomplish." This case is fortunately of very rare occurrence.

The next plan commented on by Mr. Earle, is that recommended by Sir Astley Cooper in fractures of the neck external to the capsule—namely, the double-inclined plane, first suggested by Mr. White, and afterwards improved on by Mr. James of Hoddesden. This, he thinks, is defective also, inasmuch as "there is no plan for confining the foot, and preventing it from turning outwards; the motions of the pelvis are, likewise, not at all restrained." Still, our author admits, that the principle of the double-inclined plane is excellent, and with certain modifications and additions, may probably be found the most eligible mode of treating all fractures of the thigh.

It was in the year 1806, that a distressing case of fracture induced Mr. Earle to exert his ingenuity in contriving a double bed, an account of which was published by his father. The contrivance was honoured with a reward from the Society of Arts. By this contrivance, Mr. Earle gained one object which he considered of great importance, namely, a state of permanent rest for the whole trunk and extemities, while the additional comfort of cleanliness was afforded the patient. After describing several kinds of apparatus, which he tried with more or less success, Mr. Earle comes to the plan which he now offers to the profession as capable of fulfilling every desirable indication—being, at once, simple and easy of application—endurable for an indefinite length of time—fully adequate to maintain the pelvis quiet—extend the limb—and, lastly, cheap.

We have caused a wood-cut to be taken of one of Mr. Earle's beds, and present it on the next page for our readers' inspection.



"The apparatus* consists of a modification and improvement of the double inclined plane. The bed on which the patient is placed is divided into three portions, the upper one for the trunk, the short middle one for the thighs, and the lower division for the legs. These admit of being placed at various angles and in different positions, as will be best seen by a reference to the plate. The following are the advantages gained by this apparatus:—When the patient is placed on the bed, the pelvis will, from its own gravity, remain fixed at the bottom of the angle formed by the superior and central inclined planes; and the aperture made in the central part readily admits of the patient relieving himself, and being properly cleansed, without the least movement of either trunk or extremities. Should it be desirable, in young persons, or under particular circumstances, to secure the pelvis more firmly, it may be easily accomplished by two broad straps, brought from the edge of the aperture, and passed obliquely round the upper and outer part of the thighs; which should pass once round the pelvis, and be attached to buckles at the outer side of the mattress. By this simple plan the possibility of motion of the pelvis is prevented, and firm compression may be applied over the trochanter: this will, however, very rarely be required, as, generally speaking, the weight of the pelvis is sufficient to keep it steady: and no other bandage is requisite than that which secures the feet to the foot-boards. The position of the patient, namely, on the back, on a gently-inclined plane, with the thighs and legs half bent, and the whole equally and firmly supported on a level surface, is one peculiarly easy and comfortable, and can be longest endured without complaint. The knee being bent over a double inclined plane, affords the best and easiest means of making permanent extension, by placing the fulcrum under the ham, and making a lever of the leg, whilst the foot is securely fixed to the foot-board, and all eversion or inversion prevented. The gradual curve, formed by the mattress on the double inclined plane, is exactly adapted to the naturally arched form of the thigh-bone, and is the least likely to cause any derangement in the length and direction of the broken limb. The central division of the bed admitting of being drawn out to the extent of several inches, enables the surgeon to adapt it to the exact length of the thighs of different individuals. The juxta-position of the limbs affords constant opportunity of minutely comparing them, and of observing whether they exactly correspond. The apparatus for fixing the feet at the same time supports the bed-clothes, takes off pressure from the heels, and maintains the limb at its proper length. By fixing both feet to the foot-boards, all motion of the pelvis and lower extremities is more effectually prevented; for when the sound limb is left at liberty, the patient is very apt to move it, and to shift his position from the central aperture." 128.

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* "This apparatus was rewarded by the Society of Arts, &c. with their large gold medal, and is described in vol. xxxix. of their Transactions."

The above apparatus is not merely adapted to fractures within the articulation, but to other injuries and diseases, in which a state of permanent rest is essential to recovery, as diseases of the spine and hip, compound fractures of the thigh and leg, &c. It will be seen by the wood-cut, that a swing table and reading desk are added for the patient's use and amusement. We cannot do justice to this apparatus without adding the following directions from the author.

"The mattress should be either of horse-hair, or well stuffed with the best wool, and should be nailed round its edge, at the upper division of the frame. A blanket and sheet should be separately strained over the mattress, and carefully sewed all round its edges: this will prevent any subsequent wrinkling, and by sewing first the blanket, and then the sheet, it is obvious that the latter may, if necessary, be detached, without at all desturbing the former. The whole apparatus is made narrow, both to facilitate the operations of the surgeon and nurse, in dressing or cleansing the patient, and to prevent him from shifting from the central aperture. Half a blanket and a single breadth of sheeting, will, in all cases, be sufficient; and in fitting them to the central aperture, it is better to make a cross cut from the four corners, thus, ×, than to remove any part.

"The loose edges should then be turned down, and sewed at the lower part of the opening. By this plan any hardness of the edges of the aperture will be avoided. In fractures of the thigh, the length of the healthy limb should be accurately taken, and the central division of the bed should be drawn out, so as to make a slight degree of extension at the ham, when the limb is placed over the double inclined plane. The foot-board should likewise be placed at a proper distance to meet the feet. The patient may now be placed upon the bed, and the fundament should be exactly opposed to the central opening. In fractures through the cervix the pelvic bandage may be employed, but, generally speaking, the weight of the pelvis at the bottom of the inclined plane is sufficient to keep it steady; and the patient soon finds himself so easy and comfortable that he is very unwilling to move. Both feet should be secured to the foot-boards, either by bandages or a pair of short cloth boots, made to lace in front, quite down to the toes. This plan will be found more comfortable than any common bandage, and the boot can be secured to the foot-board by screws or straps. In cases where retraction has taken place, the powerful extension obtained by placing the fulcrum under the ham, and securing the feet, will very soon reduce the limb to its proper length, and maintain it steadily in that position. In the cases in which I have employed it, I have not found it necessary to use any splints, even in fractures of the shaft of the bone; but, if requisite, they may be added. In compound fractures of the thigh or leg, where there is a probability of a profuse discharge, it will be better to add some oil silk, and a draw sheet under the part affected. When the fracture occurs immediately below the trochanter minor, and there is much spasmodic contraction of the psoas and iliacus muscles, it will be right to raise the superior and middle divisions of the bed very considerably, so as to place the thigh nearly at right angles with the body; this will completely approximate the fractured surfaces, which is with great difficulty accomplished by any other mode of treatment. As the extension in fractures occurring in any part of the thigh-bone is effected by the pressure on the calf of the leg, and in the ham, it is particularly necessary to adapt the central division of the bed to the exact length of the limb: when necessary to make any trifling alteration in this degree of extension, this is best effected by placing wedges of wood beneath that part of the mattress which supports the calf of the leg. The mattress being left loose at this part, readily admits of this being done without disturbing the patient." 134.

FRACTURE OF THE OLECRANON.

This chapter is chiefly disputative; but we shall endeavour to gather from it the practical matter and opinions which it is designed to convey.

In the summer of 1820, Mr. Earle was called to a gentleman who had been thrown out of his gig four hours previously, and whose elbow was swollen and extensively ecchymosed. Pronation, supination, flexion, and extension, could be spontaneously performed. Leeches were applied. On the third day he went to his house of business—but, on the 6th morning, he found so much difficulty in the motions of the joint that Mr. Earle was again sent for, and found that the olecranon was fractured.

> "On bending the fore-arm, a separation between the olecranon and the shaft of the ulna could be evidently traced. This separation, however, was only in consequence of the removal of the lower portion in the act of flexion; the upper portion remained exactly in its proper relative situation, and there was not the slightest disposition in the triceps to retract it." 146.

Mr. Earle placed the limb, with the fore-arm slightly bent to an angle of about 160 degrees, as nearly as possible in the position in which the arms remain in a state of repose. This allowed of the most perfect coaptation of the fractured surfaces without any forcible compression of their posterior broken edges. Splints of thick wetted pasteboard were adapted to the whole limb.—The case went on most favourably, and in six weeks he was enabled to use the arm freely. The motions of it were quite restored, and the bone firmly united without any perceptible interval. The lateral motion of the detached portion was restrained by compresses and cross straps of adhesive plaster.

The only peculiarity attending this case, and which has induced Mr. Earle to give it publicity, is the power of extending the elbow with force up to the sixth day after the accident. The tendinous expansion which covers the olecranon, had not till then, he thinks, been torn through, and, consequently, had been a sufficient bond of union to allow of extension of the arm, and to hold the fractured portions together. Mr. Earle observes, that the possibility of such a state of things as above existing should be borne in mind, otherwise a surgeon might be led into error, as it is invariably stated by surgical writers that a loss of the power of spontaneously extending the fore-arm is the constant and immediate consequence of a fracture of the olecranon. Another diagnostic mark of this fracture, as laid down by authors, is the degree of retraction of the superior portion, by the action of the triceps extensor cubili. In addition to the case above described, Mr. Earle avers that he has met with several others in which there was no retraction of the detached portion. In support of this statement he quotes the words of Mr. Sheldon, who was himself the subject of an accident of this kind. Mr. Earle thinks fracture of the olecranon by the mere action of the muscles, independent of external violence, must be a very rare occurrence, as he can find no clear account of such a case on record.

> "Certainly, in the event of such an accident, the retraction of the detached portion of bone, by the continued operation of the triceps, might be expected to follow. But in the more common mode in which this accident occurs, namely, by the direct application of violence to the base of the olecranon, with the arm in a state of flexion, the force does

> not necessarily displace the broken portions directly, nor does it follow that any consecutive retraction should take place from the spasmodic action of the triceps. As no violence is done to that muscle, there is no reason for its being thrown into spasm: and, generally speaking, any breach of continuity in a bone is accompanied with such a consciousness of inability to move the limb, that it requires a considerable effort on the part of the patient to will the muscles to act, and often the power of doing so is not at all under his control." 159.

Our author does not, however, deny the occurrence of such retraction, in some instances—but he insists upon it that it is not constant.

Doubts are entertained by some practitioners of the possibility of obtaining bony union in cases of transverse fracture of the olecranon. Mr. Earle thinks it would be obtained in every instance, provided the broken surfaces were steadily maintained in correct apposition. This correct apposition, he believes, might be obtained in the majority of recent cases, though it would be dificult to accomplish it in cases which had been neglected for some time, and where considerable retraction had taken place, accompanied by inflammation and swelling. In such cases, indeed, he questions whether ligamentous, is not preferrable to bony union.

> "It remains only to speak of the mode of treatment best adapted to fulfil the several indications. As far as my own experience goes, a slight degree of flexion of the elbow, to the extent of about 160 degrees, is the best position, and will admit of the nicest coaptation of the fractured surfaces; whilst, at the same time, it is the least irksome to the patient." 166.

After objecting to the plan of treatment laid down by Sir Astley Cooper and others, Mr. Earle gives his own, in the following words.

> "After confining the lateral motion of the upper broken portion with a slight compress, and straps of adhesive plaster carried obliquely across the elbow, and having accurately adapted the broken surfaces together, I form a case of strong pasteboard, softened with hot water: this is applied in two pieces, about a foot long; one in front, and the other at the back of the arm, which are bound with a circular roller to the arm, bent to an eagle of 160 degrees. This is left on until dry, during which time the patient remains in a recumbent posture, with the arm on a pillow. The pasteboard is then removed, and covered with wash-leather, which is glued over the surface; this gives it a great degree of solidity, and forms a very light and commodious case, sufficiently strong to resist any attempt at motion in the joint, and to protect it from any blows or injuries. With the assistance of this apparatus it is not necessary to confine the patient after a few days. With a view to prevent any swing-

ing motion of the arm, and to afford additional security against accidental blows, I have found it advantageous to have a portion of ribbon attached to the front of the patient's dress, with a loop for the thumb or wrist to hang in when in exercise. After a fortnight, or three weeks, slight passive motion may be given to the joint, which will greatly accelerate the patient's ultimate recovery." 169.

The last original paper which we have to notice in this volume is on "Injuries near the Shoulder-joint." Mr. Earle's first observations are on injuries of the clavicle. In fractures occurring at the scapular extremity of this bone, little or no displacement can take place in the fractured parts, except from the external violence that produced the fracture; but, when the fracture is between the coracoid process and sternum, very considerable displacement may take place, partly from the action of the clavicular portion of the sterno-cleido-mastoideus muscle elevating the sternal portion of the clavicle, whilst the weight of the whole upper extremity depresses and carries forwards the scapular portion.

"In the treatment of these cases the principal indications are to elevate the shoulder even, in some cases, beyond its natural level, to allow for the action of the sterno-cleido-mastoideus muscle; to keep the shoulder drawn outwards from the body, by a wedge in the axilla; and to maintain the whole limb in a perfectly passive state, as every motion of the arm and scapula must be immediately communicated to the fractured part." 177.

The figure of 8 bandage is the common application in this country.

"The only effect of these bandages is to keep back the shoulders; but, at the same time, the scapula is pressed towards the sternum, and the fractured portion of the clavicle, being connected with it, is forced under the sternal portion. When a common linen bandage is employed, the tightness with which it is applied causes most distressing excoriations of the axilla; and generally some folds of it press so much on the scapular end of the clavicle as to depress it, and thus produce the very defect which it is intended to remedy. In the employment of every form of this bandage, the weight of the whole upper extremity remains unsupported, and it is necessary that a sling should be superadded to support the arm; which, as far as it goes, forms the most important part of the treatment; but common slings are very insecure, they always allow of considerable motion of the arm, and are quite at the patient's disposal to remove or not." 178.

Desault and other later French writers, employ between twenty and thirty yards of bandage, curiously and neatly applied, so as to secure the limb in position during cure, and so effectually to unite the whole extremity to the chest, that they move together and form, as it were, one body. But this is a very troublesome process—very irksome to the patient—and very easily deranged. Mr. Earle, therefore, devised, with his usual ingenuity, an apparatus which he has found very useful, not only in fractures of the clavicle, but in various other injuries occurring near the shoulder-joint.

> "The apparatus consists of a strong sleeve, made of double jean, or linnen cloth, which reaches from half way up the upper arm, is fitted to the elbow, when bent to an angle of about 75 degrees, and terminates, like the sleeve of a straight waistcoat, in a cul-de-sac. This is applied to the arm, and secured by straps, or a lace and eyelet holds: at the extremity of this sleeve a band of strong webbing is attached, which is passed round the body, and fixed to a broad buckle, which is fastened to a belt of calf-skin, lined with wash-leather, about three inches broad, which is passed round the injured arm, just below the insertion of the deltoid. The action of this sleeve and strap is to prevent any motion in the arm or forearm, and to bind it firmly to the trunk. To support the elbow in any position which may be required, I employ a leather cap, adapted to the extremity of the elbow, and hollowed out at its centre for the olecranon. This is put on over the sleeve, and from it two broad bands of webbing pass obliquely up to the opposite shoulder; one in front of the thorax, and the other behind. These bands are affixed to two broad buckles, which are attached to a leather shoulder cap, made of calf-skin, well padded and lined with wash-leather. which is adapted nicely to the shoulder by means of a buckle and strap, which passes under the axilla. By tightening or slackening these bands, the elbow may be either confined close to the side, or brought forward, as in the position required for fractures of the clavicle or the coracoid process; and it may be permanently and steadily fixed in that position. Another strap may be brought down from the anterior oblique strap, and passed round the wrist, to assist in supporting the weight of the extremity." 188.

Two papers more conclude the volume. These are republications—one "On the Re-establishment of a Canal in the Place of a Portion of the Urethra which had been destroyed"—the other, "On the Mechanism of the Spine." These have been already noticed in the pages of this Journal.

We have now presented to our readers a very full analysis of Mr. Earle's work, controversial, critical, practical, and mechanical. If we have in a former number, had occasion to differ with our author on some controverted points of surgery, it was with great reluctance, for we hate controversies; and we can assure Mr. Earle, that we are always happy to meet him in the character of an ingenious and intelligent surgeon, advancing his science with zeal and ability.

V.

Transactions of the Medico-Chirurgical Society of Edinburgh. Vol. I. 8vo. pp. 697, four coloured Plates. Edinburgh, 1824.

IT has long been a matter of surprise, that the INTELLECTUAL CITY should send forth no medical transactions, and but one medical journal—while the City of *Shop-keepers* should send forth four series of cotemporary medical transactions, and, at least a dozen of medical journals! Perhaps, on reflection, this will not be found attributable to want of will or power in the modern Athenians, but to the limited number of their population and the small scale of their public institutions, which do not afford materials for annual volumes of transactions. Books of this nature must be charged with practical facts rather than ingenious speculations and reasonings. If the latter would pass current in the world at large, Edinburgh might cope with London. But the enormous extent of the metropolitan population, hospitals, and infirmaries must ever give the profession of this city a decided advantage in collecting facts, making observations, and trying experiments, which are now the only species of medical information that will at all be listened to or tolerated.

Still, with all these "ways and means" of the metropolis, the prodigious increase of medical journals within these few years, must excite surprise, mixed with some curiosity, to learn the causes of this multiplication. Although, in literary as well as commercial speculations, the supply will often surpass the demand; yet, in both instances, it must always be an increase of demand that creates the increase of supply. Throughout all ranks of the public at large, as well as of the profession, there exists a voracious appetite for novelty, which cannot be appeased by precarious or uncertain meals—but by a regular *periodical* supply;—the intellectual banquet being looked for with as much impatience as the savoury provender of the table. Under such encouragemont, and considering the number of spare hands now in the world, is it wonderful that there should be an impetuous rush of intellectual wares into this new channel of consumption, in the same way as there was a rush of merchandize, a few years ago, into South America? True it is that, in both instances, the market has been glutted—but speculation is equally alive—and every failure that takes place will only give origin to a new enterprize.

Medical societies have multiplied with books and journals, though not, perhaps, in the same portion. The advantages resulting from associations of medical men, where observations are communicated, opinions interchanged, and facts recorded, have long been duly appreciated by the profession at large. It is with the knowledge of medicine as with knowledge of the world—they are best acquired, or at least, perfected, by freely mixing in the society of our neighbours, where the angles and asperities of individual opinion and prejudice are gradually rubbed off by collision with those of others. In medical societies, besides the acquisition of knowledge, young men acquire a habit of arranging their ideas, and a facility of delivering them, which are of great service to them in their passage through life, Edinburgh was not deficient in debating societies—but the present is on a very different principle—that of recording and publishing the communications of those actually practising the profession, in imitation of the Transactions of Medical societies in London and Dublin. This "first offering" from Edinburgh, is distinguished more by the respectability of the contributors, than the intrinsic value of the communications—a character which, we apprehend, will attach to every subsequent volume from the same source, and for the reasons which we before stated—namely, the celebrity and number of cultivators as compared with the narrowness and sterility of the soil. There is a hint thrown out, however, in the preface, which may have some effect, and our notice of it may contribute a little to second the intention of the Society. "From the number of medical men, in all parts of the world, who have been initiated into their profession in this University, it may be hoped that the Society may become the depository of much more varied and extensive observations than the resident members themselves can hope to furnish." We hope and trust that this invitation will not be unproductive, more especially in the early annals of the Society, before self-interest and cabal begin to influence its councils and destroy all equitable arrangement of the communications submitted to the decision of its committees. Neither do we think that this appeal to the quondam students of Edinburgh will be made in vain. No one, we think, can have spent a portion of his youth in that romantic city, without having received impressions on the plastic mind, that must ever afterwards respond to the reminiscences of former scenes and associations, whether fortune expose him to the fervour of an equatorial sun, or the chilling influence of a Polar sky.

Pone sub curru nimium propinqui
Solis, in terra domibus negata:
Dulce ridentem Lalagen amabo
dulce loquentem!

The volume before us contains twenty-six communications, of very unequal extent and importance. Among the contributors, we find the names of Duncan, Abercrombie, Kellie, Ballingall, Combe, Allison, Russell, &c.—names well known to the professional ear—and not more known than respected.

ART. I.

Contributions to the pathology of the Heart. By JOHN ABERCROMBIE, M. D.

Few men, excepting Morgagni, Bonetus, or Lieutaud, have published so many *cases* of disease as Dr. Abercrombie. The motto to his writings might, with very little straining of the sense, be the declaration of Æneas—

> Per *varios casus*, per tot discrimina rerum
> Tendimus.

We have heard objections made to this multiplication of cases and paucity of general principles—but we do not join in the objections. We believe that, for a long time to come, the plan of Dr. Abercrombie must be pursued. Indeed, we greatly doubt whether many general principles will ever be *established* in medicine—for as the organized beings, animal and vegetable, which have existed on this globe at various epochs, appear to have sprung up of different shapes, sizes, and structures according to the state of the circumambient elements, so the diseases of man have varied, and will ever vary, from new causes and changes springing up, or going forward in himself, and in the moral and physical circumstances around him.*

Dr. Abercrombie divides the pathology of the heart into four classes—Inflammatory Affections—Organic Affections—Rupture—Displacement. Between the first two classes, there is in fact, no real distinction—for the *first* includes the principal organic diseases—and the *second* is merely meant "to introduce a few cases, which appear to present some phenomena *differing a little* from the ordinary cases of organic disease of the heart."

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* We see the breadth of a single mountain form the boundary between health and disease—nay, between two different states of organization. Thus, in the Valley of Chamouni, we find very few cretins or goitres; while if we cross the Col de Balme into the Valley of the Rhone, we see hardly any thing else than idiotcy and bronchocele. The inhabitants of Grindelwalden and Meyrengen, separated only by the Grand Scheidec, present quite a different complexion and physiognomy. Examples of this kind might be multiplied, ad infinitum.

I. *Inflammatory Affections.*—The distinction between inflammation of the pericardium where it is unattached, and where it is reflected over the heart, is, of course, nearly, if not quite impossible to be made in the living subject. Both forms often approach insidiously at first, and even complete accretion of the two sheets of membrane will take place before the disease is suspected. Both acute and chronic pericarditis are formidable diseases. We must considerably abridge Dr. Abercrombie's illustrative cases, and pass many of them over entirely, The following is introduced as a specimen of acute pericarditis.

Case 1. "A young lady, 16 years of age, 8th January, 1812, presented the phenomena following, viz. acute pain at the pit of the stomach—greatly impeded respiration—extreme anxiety and restlessness—pulse 120—130—no cough or vomiting. Bled freely for several days in succession, with blisters, digitalis, &c. but with little effect, as the disease continued unabated for nearly a fortnight, until active treatment could no longer be pursued. In the third week the pain abated, and the breathing became freer. She then fell into a state resembling chorea with delirium, during which she did not complain of any pain, and the breathing was natural. These symptoms subsided in a few days, and she gradually recovered her usual health, excepting some frequency of pulse. She continued well till the 20th April, when, after exposure to cold and fatigue, the original symptoms returned, *the pain being more in the region of the heart.* Depletion relieved, but did not conquer the disease, and she died on the 26th of the same month."

"*Dissection.* Adhesion of the pericardium to the heart, in toto ,by means of a thick layer of coagulable lymph, which was *soft and easily separable.* On the *outer* surface of the pericardium there was a similar deposition, nearly half an inch in thickness in some places. The surface of the heart very vascular—lungs inflamed, and, in some places, indurated—the other viscera healthy."

Dr. A. has not stated whether the external exudation was of a firmer consistence than the internal. We have little doubt that it was from the former inflammation the patient first suffered, and apparently recovered. The internal inflammation of the pericardium was of a much more formidable nature, and proved fatal.

Case 2. A boy, aged seven, had acute rheumatism in February 1819, with symptoms of carditis, both of which were relieved by copious bleeding. He continued well until November, when pain in the left side, cough, dyspnœa, and fever, were met by active depletion, which relieved the local symptoms, but the pulse continued very quick. There was no unusual pulsation in the region of the heart—tongue clean, appetite good. In this state he continued for a week. About the 20th day from the attack, he complained of pain in the left side, increased by pressure on the upper part of the abdomen. Local and general bleeding relieved this pain. Next morning he had a convulsion, and died in the evening."

"*Dissection*. The abdominal viscera and the lungs were sound. There was adhesion of the pericardium to the heart throughout—the adhesion consisting, in some places, of a soft gelatinous matter—in others, of a firm reddish substance, like that of healthy granulations—the whole being soft, and easily torn by the finger. When cleared away, the surface of the heart was covered with firm, irregular elevations, like small granulations."

The *third* case is nearly similar to the above, and need not be detailed. We may here remark, that fatal affections of the heart, whether in young or old, are very rarely so masked as in the foregoing case. An attentive examination of the functions of this organ, and its action within the chest, will very generally reveal the lesion in question.

Case 4. This case is introduced by Dr. Abercrombie to show that carditis may be going on insidiously in the course of another disease, by which it is, as it were, masked for a time.

"A girl, 12 years of age, had erysipelas on the face, not severe, and confined to one cheek, but with considerable fever, and obstinate constipation. For several days the bowels resisted medicine, but about the 12th day the disease appeared to give way. About the middle of this period, however, Dr. Abercrombie found the little patient complaining of pain in the left side, which disappeared soon, and the breathing was unaffected. By the 14th day, the erysipelas had terminated by desquamation of the cuticle, and the fever had subsided—the tongue clean—the appetite returning. On the 15th, things took a turn for the worse. Her pulse became slow and irregular—the body cold—she died on the same day."

Dissection. "The brain, lungs, and abdominal viscera healthy—the pericardium distended with about twelve ounces of a turbid, milky fluid, with flocculent matter floating in it. The whole inner surface of the pericardium, and the outer surface of the heart, covered by a uniform coating of coagulable lymph of considerable thickness."

That this disease was, at least, coeval with the erysipelas, there can be no doubt—indeed, we are confident, that it long preceded the last-mentioned affection. We therefore, suspect a laxity of observation in the case, otherwise the carditis would have been detected, or, at least, suspected, before the last day of the patient's life. Many of Dr Abercrombie's cases, indeed, are very imperfect sketches as far as regards the history of the disease—being mere "on dits" of the patient, or previously attending practitioner, Dr. A. only coming in at the close of the malady. We shall take the first case that offers as an example.

Case 5. "A man, aged twenty-three, died after an illness of seven months, in which the symptoms were *rather obscure*. When I saw him a short time before his death, he was much emaciated, but without any cough or expectoration. He had some pain in the left side, and at times a degree of dyspnœa, with quick, breathing, but it was neither constant nor severe; and, when asleep, his breathing was quite natural. His appetite was good, and bowels natural; his pulse generally 100, or above it, but quite regular. The most prominent symptom was a strong pulsation of the heart, which was constant and violent. He died gradually exhausted, without any other symptom.

Dissection.—"The pericardium adhered intimately to the heart through its whole extent. It adhered also to the neighbouring lung. The right lung was adhering, and slightly hepatised, and much gorged with blood. On cutting into it, a cavity was laid open, the size of a pigeon's egg, full of watery fluid. The left lung was much loaded with frothy mucus. The spleen was enlarged, and tubercular." 14.

Here we have only the words "*rather obscure*," for almost the whole history of the case. Who can doubt, but that an accurate investigation of this young man's malady, by percussion, auscultation, and a thorough examination of the functions, would have revealed disease of the heart and lungs long before the period embraced by Dr. Abercrombie's account?

Our author justly observes that, when inflammatory affections of the heart are not speedily fatal, as in the above cases for example, they frequently terminate by adhesion of the pericardium to the heart, the disease then passing into the chronic state, and being protracted for a longer or shorter period, according to circumstances. Although in some cases of this kind the symptoms are obscure and undefined, yet, in general, we find the action of the heart violent, with more or less embarrassment in breathing, and, at last, dropsical effusions, grangrene of the extremities, or death from gradual exhaustion.

"This highly dangerous and insidious affection occurs to us most frequently in connection with rheumatism; but it may also supervene upon any other febrile disease, or it may come on in an idiopathic form, without any previous disorder. In its connection with rheumatism, it may either attack when the rheumatic inflammation has suddenly receded, or it may appear at the termination of the disease, when the rheumatism has yielded in the ordinary way; or it may appear without any change in the rheumhtic symptoms, and both complaints go on together. The symptoms vary considerably in different cases. In some there is pain in the region of the heart; in others none. The breathing is generally more or less oppressed, but sometimes in a slight degree; while, in other cases, the oppression is so sudden and violent, as to prevent articulation, and threatens instant death. There is, in general, strong pulsation of the heart; in many cases so violent, that it can be felt over every part of the thorax, and even by the hand laid upon the abdomen. In some cases there is vomiting, and in some cough; but cough is not a regular symptom. The pulse is generally frequent, sometimes extremely so; but in other cases it is little affected, and it has even been observed below the natural standard. Respiration is sometimes hurried, but not uniformly so; for in a severe case mentioned by Dr. Wells, in which the pulsations of the heart were 190 in the minute, respiration was soft and easy, and not above 24. Attacks of syncope sometimes occur; and in one case which has been communicated to me, syncope was induced by pressure upon the spot corresponding with the apex of the heart." 16.

A very small proportion of cases have, as yet, terminated favourably—yet it is not so uniformly fatal as it was twenty years ago. The prognosis, however, may generally be unfavourable, and, at the best, very guarded; for, even under the most judicious practice, when the disease appears to be subded, the adhesion of the pericardium to the heart may have taken place, and the evil prove irremediable.

"The disease occurs in a more chronic form, in which it steals on slowly and insidiously without exciting much alarm. This form also may supervene upon rheumatism, or may come on without any previous disorder. After a rheumatic attack, or after slight inflammatory symptoms like a severe cold, the patient begins to feel a pulsation in the region of the heart, more or less violent, at first probably not constant, but excited by any exertion; the attacks being accompanied by some degree of breathlessness, a feeling of suffocation, and sometimes a remarkable throbbing in the head. The affection goes on gradually increasing,—the pulsation becomes permanent,—the attacks of dyspnœa more frequent and severe; till at length dropsical symptoms appear. In some cases the pulsation is not perceived, while the patient is lying perfectly still in the horizontal posture, but is excited by the least exertion, or by rising into the erect posture. On dissection, in both forms of the disease, we generally find the extensive adhesion of the pericardium to the heart, or sometimes, though more rarely, both surfaces covered with coagulate lymph, without adhesion. In the cases which have gone on for a considerable time, the heart is generally enlarged. This enlargement seems to be in many cases confined to the left ventricle, and to consist of an enlargement of the cavity, without thickening of the parietes. In a case by Dr. Baillie, it contained ℔ij. of blood. The substance of the heart is generally found pale, soft, and flaccid; and, in some cases, the effects of inflammation have been found in the cavities, as deposition of coagulable lymph within the ventricles, or about the valves, thickening of the valves, and tubercles, or projections of various sizes, on the inner side of the auricle or ventricle." 18.

Case 6. A young man, aged 11, experienced a rheumatic attack in June 1817, the affection being accompanied by strong palpitation of the heart. The rheumatism confined him several weeks and then subsided, the strong action of the heart still continuing. In the winter of 1817 he was confined, (but from what symptoms Dr. A. does not inform us) and the next summer (1818) was taken to Bath, where he was weak and felt much oppressed, but the only distinct symptom was palpitation of the heart. Again he was confined in the winter of 1818, and in the spring of 1819, seemed to recover perfect health, going to dancing schools, and taking much exercise—*but still the inordinate action of the heart continued.* During the summer of 1820 he continued apparently well; but, in the autumn, he began to have some difficulty of breathing, and some œdema of the ancles. These symptoms were relieved by medical treatment; but he continued in ill health all the winter, unable to use any exertion. In the summer of 1821 he again improved much, and in the winter of that year was able to attend the university—the pulsation still continuing in the thorax. In April 1822 he was seized with rheumatism, accompanied by increased pulsation of the heart, and soon followed by dyspnœa and anasarca; and now the disease made more rapid progress, till June and July, when he again rallied for a short time, but fell back again, and died in the beginning of September.

Dissection.—"On opening the thorax, the heart appeared of enormous size, seeming to fill more than half the cavity, and pressing the lungs upwards. The pericardium adhered intimately to every part of the surface of the heart; and externally it adhered extensively to the diaphragm and the left lung. The enlargement of the heart was found to be entirely in the left auricle and ventricle, which were prodigiously enlarged and distended with dark grumous blood. The auricle was a great sac, containing at least ℔i, and the ventricle was enlarged in a still greater degree. Along the posterior part of this immense ventricle, the right ventricle was found lying in a collapsed state, a little elongated, but not diseased. The parietes of the left ventricle appeared rather thinner than natural, and the substance of it was pale, soft, and flabby. The aorta and its valves were healthy. The valves betwixt the left auricle and ventricle were thickened, and contained some nodules of bone. One half of the valve was considerably puckered and contracted; the other was elongated, and of a thick, firm, fleshy consistence. The aperture was quite free. The lungs were dark coloured, and much loaded with fluid. There was some fluid in the cavity of the pleura, and a small quantity in the ventricles of the brain." 22.

Case 7. The next case related by Dr. Abercrombie was more rapid in its course, though nearly similar in its nature. Cardiac affection followed two attacks of rheumatism in a young man, and resisted depletion and other means of relief. He died suddenly (three months from the commencement of the diease) in getting out of bed. On *dissection*, the left chambers of the heart were greatly enlarged—the auriculo-ventricular valve of that side imperfect and corrugated, so that it was incapable of shutting the communication between the two chambers—liver and spleen enlarged.

Dr. Abercrombie relates two cases "of the disease treated successfully." One of these, as it is short, we shall give in the author's own words.

> *Case* 8. "On the 21st January 1817, at seven o'clock in the evening, I saw a man, aged twenty-four, who was affected with acute rheumatism chiefly seated in his wrists and ankles, especially the later, which were swelled, extremely tender, and highly inflamed. He complained of an acute pain in the region of the heart, increased by inspiration; his breathing was so oppressed an anxious, that he was unable to lie down, but was supported by pillows in a half sitting posture. The pulsation of the heart was so violent, that it was felt distinctly over every part of the thorax, and on the upper part of the abdomen. The pulse was 106, and intermitted about twelve times in a minute. The rheumatism had existed about a week; the pulsation of the heart had been felt for two days; the pain and dyspnœa had commenced on the morning of the 21st. A few hours before I saw him, he had been largely bled by Dr. Beilby; and we immediately bled him again to between 30 and 40 ounces. After two hours more we found him considerably relieved. Pulse 112, and regular. The ankles still highly inflamed, and extremely tender. He was again bled to 18 or 20 ounces, when he fainted completely, and lay for a long time in a state of extreme collapse; the pulse scarcely to be felt. The inflammation now completely left his ankles; and he could allow them to be moved or pressed in any way without uneasiness; his breathing was quite easy, and the pulsation of the heart had subsided. On the following day he was free from uneasiness, and continued well, except from slight rheumatic pains, without fever, which subsided in a few days." 28.

Upon this case we would remark that, there is a great difference between the simple extension of rheumatic inflammation to the heart, for the first time, and that organic change which afterwards goes on as an effect of inflammation. It is a comparatively easy matter to check or remove the first, but a very difficult task to do the same with the second. But, after all, is this a case of cure? It is precisely in the above circumstances that we find affection of the heart *follow*, at longer or shorter intervals, the cessation of rheumatism in rheumatic metastasis. The patient's subsequent health is, therefore a matter of query.

The case 13, page 29, we believe to have been one of functional disorder of the heart in a female of arturitic habit, rather than inflammation of the heart's structure. This disordered action of the heart was not removed when the case closes. The patient was a lady, aged 58, of a full habit, who was seized on the 6th September with severe lumbago, "*unaccompanied by fever or any other symptom.*" The complaint subsided in five or six days, and, in a few days, after its cessation, she felt a pain darting from the back to the breast and left side, with a sense of "*fluttering at the heart.*" This and palpitation, with irregularity of the heart's action, continued for several days, in spite of copious depletion and blisters. At length, the symptoms considerably subsided, after full vomitting produced by previous blood-letting carried to syncope.* Nevertheless, after nearly a year's interval, "*her pulse has been always irregular, and she is liable to strong action of the heart, upon any exertion or exposure to cold.*" We do not, therefore, consider this as a case of carditis—nor the cure complete. We may just remark, that the general blood-letting in the above case, appears to have been carried to an extreme extent, considering that there was no pyrexia—no appearance of inflammation in the blood abstracted. We have seen several cases of this functional disorder, and they were best managed by perfect quietude, and very gentle evacuations, succeeded by antispasmodics and anodynes.

Here our author makes some pathological observations on *active* and *passive* aneurism of the heart. The *former*, he thinks, arises from organic obstruction to the transmission of blood or from such imperfection of the valves as allows the column of blood to act backwards upon the cavity whence it issued—" the muscular parts in both cases being in a sound and vigorous state." The enlargement on the other hand, which supervenes on inflammatory action, appears to Dr. Abercrombie to be owing "*to an impaired condition of the muscular power produced by the inflammation, the cavity becoming incapable of emptying itself, and being gradually dilated by that impulse which, in the healthy state, would have excited it to contraction.*" To this pathology we cannot altogether subscribe. We believe there are few attentive observers who have not examined many cases where the inflamation was unequivocal, and yet the *active* aneurism or hypertrophy appeared on dissection. In short, our experience has led us to a contrary conclusion from that of Dr. Abercrombie—namely, that *inflammation* is far more frequently found in the conjunction with *active* aneurism, than with *passive* dilation of the heart. In three fourths of those cases of diseased heart, which follow acute rheumatism, or its translation to the heart, we find the parietes of that organ *thickened*—although inflammation had been ravaging on its muscular structure throughout the disease.

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* No febrile symptom is adverted to in this report.

According to Dr. Abercrombie's doctrine, we should, in these cases, find passive dilatation, which is but seldom the case comparatively. We agree with our author, that the term angina pectoris has been made to include several affections considerably different in their nature. It seems, also, to be admitted, that the disease in question cannot always be traced to any cognizable organic affection of the heart. The ossification of the coronary arteries, to which it has been referred by Dr. Parry and others, is known to be very often wanting; and to be present without symptoms of angina pectoris. Dr. Abercrombie sees no principle upon which the phenomena of syncope anginosa can be explained "except a derangement of the muscular action of the heart."

> "The term Spasm has sometimes been applied to them; the phenomena appear rather to favour the conjecture of diminished action, one of the cavities being loaded with blood, which it is unabled to expel, and thus interrupting the harmony of the whole. It is probable that such a condition of the parts may occur as an incidental and temporary affection, and that, after continuing to recur for some time, it may be removed, and the parts be restored to their healthy relations. But, it is also probable, that after it has once taken place it may be more and more liable to recur from slight causes, until it terminate in permanent diminution of the muscular power of some part of the heart, and this be followed by permanent enlargement." 36.

We are inclined to agree with our author in a great measure, on the above point—and also on another, the probability that a slight degree of rheumatic inflammation, not sufficient to excite attention at the time, may lay the foundation for disease of the heart in some cases. It must be confessed, however that the whole subject is involved in great obscurity. Dr. A. here introduces three cases, showing angina pectoris with ossification of the coronary arteries—the disease without any such appearance—and extensive ossification without symptoms of angina pectoris. The second case is the most interesting, as presenting the phenomena of angina pectoris from imperfection of the valvular communication between the left auricle and ventricle. As the case cannot be abridged, we shall give it in Dr. A's own words.

Case 9. "A gentleman, aged fifty, of a full habit, consulted me first in July 1821. At that time he complained of an obscure uneasiness across the epigastric region, occasional palpitation, and a pain in the region of the heart, which attacked him at uncertain periods, especially if walking quick or up-hill. On these occasions it generally obliged him to stop; and if he attempted to persist in walking, vomiting was induced. In the night-time, he was occasionally seized with difficult breathing, accompanied by a pain extending from between the shoulders to the sternum, so violent as to oblige him to get out of bed immediately. His pulse was regular, and his general appearance that of robust health. The complaint was of two years standing. At its commencement, it came on suddenly while walking; and the first attack was accompanied by a sensation 'as if a fluid ran from the right side of the chest to the left side and then stopped suddenly, passing through a space of three or four inches.'

"Soon after I saw him, he went to the Continent, where he thought himself consiberably better. He returned to London in 1822, where he was frequently seized in the night with attacks of violent dyspnœa. He returned to Edinburgh in the beginning of winter. In the night of 23d December, he was seized with one of these attacks of dyspnœa, so severe as to threaten instant death. He was described to me by a surgeon, who saw him in the attack, as affected with the greatest degree of dyspnœa; his face lived; his body cold, and covered with a clammy sweat; his pulse scarcely to be felt. He was unable to speak, was nearly insensible, and appeared moribund. In this state he continued about two hours, and then gradually recovered. He consulted me again on the day following this attack. He was then in his usual health, and described his symptoms precisely as he had done in 1821, with the addition of these severe attacks of dyspnœa, which, however, had only occurred a few times, and at long intervals. He had also been lately seized, while in bed, with pain in the arms, extending across the chest, and accompanied by some dyspnœa, cough, and expectoration. He lay with greatest ease on his back. If he turned to either side, especially the right, he was apt to cough. His pulse was a little frequent, but regular; and his general appearance was still that of robust health. There was nothing unusual to be felt in the action of the heart. His urine was rather scanty. He was now put upon a regulated diet, with attention to his bowels, some diuretics, and confinement to the house, the weather being very cold. Under this plan he improved remarkably, and in the subsequent visits which I paid to him, he made little or no complaint. His nights were much better; his breathing easy; his pulse quite natural. My last visit to him was on the 16th January 1823, when he seemed in excellent health and spirits, and made no complaint, except that he was becoming very impatient of confinement. In the following night he was seized with a fit of dyspnœa, and was dead in a few minutes, before a surgeon, who lived in the floor above, reached his apartment.

Dissection.—"The lungs were much loaded with blood, but in their structure quite healthy. The right cavities of the heart were natural; the left auricle and ventricle were considerably enlarged, and loaded with blood; their parietes appeared about the natural thickness, except a small part near the apex of the heart, which was remarkably thin. All the valves were quite healthy; and no other morbid appearance could be discovered, except a remarkable enlargement of the opening betwixt the left auricle and ventricle. They had quite the appearance of one continued cavity, with scarcely any division; and it appeared evident, that the valve could have had but a very imperfect action in shutting the opening. There was some bloody fluid in the cavity of the thorax, and a slight appearance of ossification at the commencement of the aorta." 41.

The next subject which engages Dr. Abercrombie's attention, is what has been termed polypous concretions in the cavities of the heart. It is not now considered generally as a cause of disease, but as a deposition of fibrin in the act of dying, or very soon afterwards. We are by no means of opinion that this is always the case, for we have seen several instances where the concretion was so organized as to prove its having existed in the cavities of the heart long before death. Dr. Abercrombie is inclined, also, to attach more importance to these appearances than is generally done. "In the following case, (says he) it occurred in such a remarkable extent, that it could not be considered as an incidental occurrence."

Case 10. "A gentleman, aged sixty, had been liable for six years to palpitation of the heart and dyspnœa. After some time, he became dropsical; was often relieved by diuretics; but the dropsy always returned after various intervals, the intervals becoming shorter. Four years before his death he was seized with hemiplegia of the right side, and his speech was considerably affected. From these symptoms he never recovered. When I saw him along with Mr. William Brown, a short time before his death, there was a strong and irregular pulsation of the heart; the pulse was weak, irregular, and rather frequent. He was liable to severe attacks of dyspnœa, and occasionally to fits of extreme faintness and coldness. He had general dropsy, palsy of the right side, and inarticulate speech. He died, gradually worn out by protracted suffering, in September 1818.

Dissection.—"There was extensive effusion, both in the thorax and abdomen. The pericardium adhered to the pleura costalis by a firm, narrow band, less than an inch in length. The heart was much enlarged. Upon opening the right ventricle, the cavity was found much enlarged, and completely filled and distended by a firm, solid mass of fibrin, of a light yellowish colour, without any appearance of blood. On removing the mass, which was of very great size, a small quantity of blood was found below it. The left ventricle was also enlarged, and was full of grumous blood. No disease could be discovered in the structure of the heart, after the most careful examination, except that the substance of it appeared paler than natural. The enlargement seemed to consist in the dilatation of the cavities, without increase of substance. The aorta was sound. The lungs were much loaded with fluid; and a little indurated. In the anterior part of the left hemisphere of the brain, a portion of the cerebral substance, the size of a large walnut, was of a brownish-yellow colour, and much indurated, except at its lower part, where it was approaching to suppuration." 48.

II. *Organic Diseases.*—It is evident that nine-tenths of the cases we have been considering were organic diseases; and, therefore, this division, "differing *a little* from the ordinary cases of organic diseases," appears to us quite useless. There is no class of diseases in which we do not find numerous cases differing *not a little*, but a great deal, from the ordinary course; and the division of such would be endless. Under this head, Dr. Abercrombie has stated six cases. The following is the only one of these which we think it necessary to present to our readers.

"A young lady, aged eighteen. I was first consulted about her in September 1822, on account of anasarca of the legs. No other symptom was complained of; but, on examination, I discovered a remarkably strong and extended pulsation of the heart, of which I could obtain no history, except that she had been for several years liable to palpitation, but had experienced no inconvenience from it. The pulse was quite natural. The anasarca soon disappeared under the usual treatment, and she went to the country in her usual health. Some weeks after she had cough, with pain of the breast, and was bled from the arm with relief. She then made no complaint; but the strong and extended action of the heart continued. In the beginning of winter, she had again cough, and considerable expectoration, which had a puriform character. The pulse slightly accelerated, but quite regular. The strong action of the heart continued; and it appeared on close examination that it was not synchronous with the pulse, but seemed to alternate with it. She seemed to suffer little or no inconvenience from it. Through the winter she continued with little change, and no very urgent symptom. The cough varied; sometimes troublesome and sometimes less so; the pulse regular, and very little above the natural standard. In the end of February she was out several times, but, in the beginning of March, the anasarca returned, with some hæmoptysis, dyspnœa, lividity of the countenance; and she died about the 20th, the action of the heart having continued as before, and the pulse nearly natural up to the day of her death.

Dissection.—"On opening the thorax, the pericardium appeared to extend over a much greater space than usual; it adhered closely to the left lung, and the right adhered closely to the mediastinum, so as to form one continued uniform surface. On the outer surface of the pericardium, there was some deposition of coagulable lymph. Internally it contained a good deal of fluid, and was free from any adhesion to the heart. The heart was much enlarged, and presented a singular appearance, being distinguished into two separate portions, one of them of a deep purple colour, the other of the usual colour. The former was the right auricle, so enormously enlarged as nearly to equal all the other parts of the heart; it was thin, and completely distended with dark grumous blood. The right ventricle was also much enlarged; the auriculo-ventricular aperture was large, and the valve corrugated. The left auricle was enlarged, and distended with grumous blood, and the auriculo-ventricular aperture was reduced to a narrow opening, by the thickening of the valve, and the adhesion of the parts of it to each other. The left ventricle was quite of the natural appearance, and the valves of the aorta quite healthy. The lungs were considerably hepatised; the left was much compressed by the enlarged heart." 57.

The principal lesions in this case were confined to the *right* side of the heart, which explains the "nearly natural state of the pulse."

III. *Rupture of the Heart.*—Our author has met with two cases of this dreadful accident, within the pericardium; and the symptoms were so different that one of them, Dr. A. avers, "might have been mistaken for apoplexy." The reader will, we think, be as much surprised as ourselves, when he peruses this case *resembling apoplexy.*

"A man, aged about thirty-five, had complained for some time of headach, but had not been confined from his usual labour which was that of a joiner. One evening he had returned from his work, and was sitting by the fire, when, in stooping forward to lift something, he fell forward on the floor and expired." 60.

In the above case we do not perceive a single symptom of apoplexy—except the last—the *expiring*, which, we believe, is common to fatal cases of all diseases. As for *headach* we have never observed it complained of *in* apoplexy, and it is well known to precede or accompany innumerable other diseases, so that it cannot be enumerated among the symptoms of apoplexy.

In the foregoing case, all was found healthy in the head, but the heart was ruptured, and the pericardium distended with coagulated blood.

Dr. Abercrombie relates a case which occurred in the practice of Mr. George White, which is very remarkable, and of which we shall present the reader with the particulars. A man, aged 77, robust for his age, was at work as a labourer, on the morning of March 19, 1823, when he was suddenly seized with pain in the chest, extending from spine to sternum, accompanied by sense of great weakness. With difficulty he got home, when his pulse was found to be extremely small and feeble, but regular and not frequent. He lived ten days in this state, with very little change of symptoms. On dissection, the cavaties of the pleura contained three pints of fluid. The lungs were sound.

The pericardium contained an immense quantity of coagulated blood. The aperture from which the hæmorrhage had taken place was in the left vetricle, and not larger, externally, than to admit the point of a catheter, but communicating, internally, with an ulcerated surface the size of a shilling.

IV. *Displacement of the Heart.*—Only two cases of this kind are related, and we do not deem them of importance.

We have now furnished our readers with a very full analysis of Dr. Abercrombie's paper, which will enable them to appreciate its practical value. Dr. Abercrombie's object was, of course, pathological; otherwise, he had a wide field for observation on the various and extraordinary functional disturbances and physiological phenomena produced by organic affections of the heart. We part from this able physician and pathologist with the most perfect esteem and respect.

ART. II.

Remarks on the Cranium of a man who died of Syphilis. By GEORGE BALLINGALL, M. D. Professor of Military Surgery, &c. &c.

This short but interesting paper bears on a question of deep practical importance, by no means decided in the surgical world. We shall exhibit the prominent particulars of the communication.

In May 1822, Dr. B. visited a man, who was apparently near his end from syphilis or, as it is called, "the Poison of Mercury"—or pseudo-syphilis—or a mixture of all these, such is now the entangled state of the question! All that could be learned was, that the disease had commenced by an ulceration on the penis, destroying part of the glans, followed by buboes, ulcerated throat, cutaneous eruptions, and exfoliations of bone from the nose. He had laboured under the disease for years—had been treated by several practitioners—had used much mercury and other remedies. He was now taking decoction of sarsaparilla and Plummer's pill, under the direction of Dr. Kenny. He was extremely emaciated—the face and upper part of the scalp covered with numerous blotches and incrustations, one of which projected like a horn over the centre of the frontal bone. Various superficial ulcerations and blotches were also conspicuous on his body and limbs. Under the medicines abovementioned he rapidly recovered, so as to be able to go about—and live irregularly. He caught cold—had a relapse, and died in a state horrible and loathsome to himself and others. The following were the appearances on dissection.

"On examining the exterior surface of the cranium, a circular portion of the right parietal bone, about the size of a shilling, may be observed flattened and somewhat rough; from this an exfoliation had taken place previous to the patient's coming under my care. On the interior surface of the bone, opposite to this spot, the impressions of numerous small vessels are to be seen deeply indented into the bone, and giving it a rough scabrous feel.

"On the central aspect of the frontal bone, two circular portions are to be seen marked by the impressions of numerous small vessels similar to what is observed on the parietal bone.

"Large portions of the superior maxillary bones, including the alveolar processes of the front teeth, are in the progress of exfoliation.

"On examining the base of the skull, the condyloid and cuneiform processes of the occipital bone, and the posterior clinoid processes of the sphenoidal bone, may be observed partially diseased." 71.

Of this case, Dr. B. observes, different views will be taken, according to the tenets of the practitioner. The patient will be considered by one class as poisoned by mercury—by another, as sacrificed for want of it. There is no doubt, however, that the disease, under which the patient fell, had a venereal origin, "and" says Dr. Ballingall, "from my never having observed a similar affection of the bones in any of those numerous cases in which I have exhibited mercury to a large extent, for the cure of hepatitis, I am naturally inclined to consider the morbid appearances which this skull presents as the result of the syphilitic poison." In support of this, he contrasts the above case with the three following.

"1. In the year 1812, while serving in the East Indies, Charles Forster, a soldier of the Royals, came under my care affected with venereal blotches and ulcerations on various parts of his body: he had considerable swelling of the nose and face, with an offensive discharge from the nostrils; and after the exfoliation of a portion of the vomer and inferior spongy bone, a discharge of about sixty or eighty maggots took place from the antrum. This patient was at the same time affected with phthisical symptoms, and, notwithstanding these, I was induced to persevere in the use of mercury, under which he recovered.

"2. In the course of last year, I saw a young lady several times, who was kept for *seven months* under the influence of mercury, for the cure of an obstinate liver disease, and eventually recovered, without any affection of the throat, skin, or bones.

"3. For the last *two years*, I have occasionally visited a lady labouring under extensive visceral disease, whose system had been for nearly the whole of the above period under the influence of mercury, and who nevertheless, has not had the smallest symptom of mercurial disease,—no ulceration of the throat,—no eruption on the skin,—no thickening of the periosteum,—nor caries of the bones.

"It were easy for me to refer to numerous cases similar to the above, but at present this appears to be totally unnecessary; for while rotten bones have long been considered the legal inheritance of those who have suffered much from venereal disease, I am not aware that a *single instance* has yet been brought forward of mercury producing a similar affection of the bones, when exhibited for the cure of any other disease than syphilis; and until well marked and unequivocal cases of this kind shall be produced, those who advocate the utility and safety of mercury are not bound to obviate an objection to its use, which has not been proved to exist." 73

Our own experience coincides with that of Dr. Ballingall.

ART. III.

Some Observations on a peculiar Affection to which the Bones of the Cranium are liable. By JAMES RUSSELL, F. R. S. E. &c. &c. &c.

Our author observes, that the bones of the skull are liable to the diseases of other bones, as caries, erosion, exfoliation, &c. and, also, to an affection peculiar to themselves, namely, the complete separation of a portion of the flat bone from its neighbours, without any apparent disease, by a process of absorption. A similar process is, no doubt, employed by Nature, to separate the dead or diseased parts of the body from the sound—but here no disease apparently exists to give excitement to the absorbents for such operation.

"I first witnessed an instance of the separation of a portion of a sound parietal bone, in the case of a young man, who had a small tumour removed from the scalp by excision. The base of the tumour adhered to the pericranium, which had to be removed along with it; and by its removal, left a small portion of the cranium bare. But this very limited denudation of the cranium would not, under ordinary circumstances, have produced any perceptible effect; or at most, only the exfoliation of a superficial lamella of bone not thicker, nor more extensive than a herring scale. But the separated portion to which I refer, was the whole thickness of the cranium, and equal in dimensions to a crown-piece. In all its circumstances, it possessed the character of a healthy bone, retaining the colour, thickness, weight, and every other appearance of health. No circumstance appeared in the history of this case, to account for the commencement of the separation of this portion of healthy bone at so great a distance from the place where the irritation was applied. There was no useful purpose to be accomplished by the removal of this large portion of healthy bone; so that the cause from which this process originated is involved in complete obscurity.

"The next instance in which I had an opportunity to observe the commencement of a similar process, was in the case of a young lad, who had his skull fractured by a fall. He died in about twelve days after the accident, when the erosion was found to have begun at a considerable distance from the place where the injury had been received. The nature of the violence which a fall produces will not account for the establishment of the process of absorption, at so great a distance from the place of the original violence, since there is nothing in the nature of the violence itself, to affect the texture of the bone, and to excite irritation, at the remote place where the absorption began." 76.

From Mr. Russel's reasonings on these two cases, we have not been happy enough to glean any thing that elucidates the nature of them. They are, like many other anomalies in medicine and surgery—inexplicable.

Art. IV.*

On Dislocation af the Hip and Shoulder Joints. By Adam Hunter, M. D. &c. &c. &c.

We owe the present paper of Dr. Hunter to the circumstance of his having dissected a *recent unreduced dislocation* of the hip-joint, and witnessed two of the shoulder; one recent, the other apparently of very old date—both of which had been reduced.

Hip-joint. There was an apparent difference of an inch in the length of the limbs, when the corpse was placed on the table, the dislocated limb being the shorter. The toes were turned inward—great enlargement and fulness of the upper part of the thigh and hip, completely concealing the trochanter. On separating the gluteus maximus from its various origins and its subjacent connexions, the head of the femur was brought into view, passing under the edge of the gluteous medius, lying deeply imbedded in coagulated blood, and bound down very firmly on the sacro-sciatic notch, by the inferior and posterior edge of this muscle, which passed over the neck of the bone. On clearing away the blood, Dr. H. found that the head of the femur lay between the pyriformis muscle and the great sciatic nerve, pressing the muscle against the superior and posterior part of the notch, and the nerve against the inferior and anterior. The nerve was quite flattened by the pressure.

"I now raised the gluteus medius, which set the thigh bone free, and likewise displayed such an appearance of destruction and confusion, as it is impossible for language to describe. To say which was the attachment of the gluteus minimus, of the pyriformis, of the obturator internus or in fact of any of the smaller muscles inserted into the vicinity of the trochanter, was impossible; but when I said 'I raised the gluteus medius which set the thigh bone free,' a suspicion of what had taken place must have occurred to every one's mind, viz. that all the small muscles near the joint, and the ligaments which belong to it, were torn from their attachments; and this was literally the fact, as the head of the femur, which was previously kept fixed and immoveable by the stricture formed by the inferior edge of the gluteus medius, could now be made to move freely in every direction. Having removed the coagulated blood that lay on the surface of the gluteus minimus, I found that it was so much bruised and lacerated by the head of the femur passing over its surface, as to be reduced to a gelatinous or pultaceous mass." 173.

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* We have passed over Dr. Kellie's long and curious paper in the work under review, because we were unable to do justice to it at the close of an article. We shall not fail to take due notice of it in our next number.

Dr. H. next directed his attention to the state of the ligaments, both of which he found completely torn from the head and neck of the femur. To bring the acetabulum into view, he cut across the large muscles that descend from the pelvis, at a short distance from the trochanter, thus separating the limb from the trunk. This afforded another proof of all the small muscles having been lacerated from their attachments. "The capsular ligament was, throughout its whole extent, attached to the circumference of the acetabulum, and the round ligament, quite entire, but slightly raised from its attachment, was lying in the bottom of the socket." In addition to these morbid appearances, there was a dislocation of the sacro-iliac synchondrosis; together with a fracture of the os innominatum of the right side, which traversed the acetabulum.

Dr. Hunter admits, what indeed is most obvious, that the preceding case is an extreme one, and cannot, therefore, be taken as a sample of the extent of injury to which the soft parts are liable in all cases of dislocation. Still, our author is inclined to think, that, in many cases of this accident, the soft parts suffer to a much greater extent than surgeons are willing to admit. Here Dr. Hunter offers some strictures on the observations of Sir Astley Cooper on this point. But when we remember that the patient in Dr. Hunter's case, was literally broken to pieces by the accident, whatever it was, it is quite impossible for us to take it as an example of the injury done to the muscles in dislocations. That this injury cannot be any thing like what occurred in Dr. Hunter's case, may be inferred from the speedy recoveries which generally take place when reduction is properly and early accomplished. We shall introduce the concluding passage from this paper.

"The above case, however, points out a new and additional force, exerted by one muscle, which has not been noticed by any previous writer that I have had an opportunity of consulting. The head of the femur, it will be remembered, had passed from beneath the inferior edge of the gluteus medius muscle,—the neck was firmly embraced by its margin,—the trochanter lay concealed behind its fleshy belly; and during life, while the stimulus of altered position existed, and the irratibility of the muscle must have kept it in a state of continued violent contraction, the neck of the thigh-bone must have been embraced with immense force. Had reduction, therefore, been attempted, during the life of the individual, the head of the bone must have experienced a very powerful resistance to its return from this cause. The stricture thus exerted by the margin of this muscle, passing over the neck of the thigh-bone, like a cord over a pulley, will, I think, most probably be the case in every instance of dislocation upon the sacro-sciatic notch, and consequently may be adduced, as a most admirable illustration of the propriety of that preparatory treatment, of lowering the tone of the muscular fibre, previous to the attempts at reduction being made, which has been so highly recommended, and practised with so much success, by Sir Astley Cooper." 178.

The dislocation of the shoulder, in the same individual, was similar to that of the hip, but with still more injury to the parts. There was a laceration in the belly of the deltoid muscle, fracture of the humerus, rupture of the tendon of the supra-spinatus muscle, of the capsular ligament; fracture of the coracoid process of the scapula, &c. &c. Surely Dr. Hunter would not adduce this as an example of the lesion of parts in shoulder dislocation. The same observation bears on this as on the former case.

ART. V.

On the Use of Tobacco in Tetanus. By THOMAS ANDERSON, M. D. Inspector of Health of Shipping, and Member of the Medical Board, Port of Spain, Trinidad.

We believe that more than one or two practitioners in this country have made trials of tobacco in tetanus, and apparently with success. Dr. Anderson resides in a climate where the disease is more prevalent than in this; his opportunities of observation are, therefore, numerous, and we hope he will prosecute a subject which, in this paper, is little more than broached. Tetanus is not so frequent in Trinidad, as in some other of the West India Colonies, and less so in the town of Port of Spain, than in the country. Negroes are more often the subjects of it than Europeans, and among them, males more commonly than females. Several cases of traumatic tetanus proving fatal under the ordinary modes of treatment, our author was led to try the effects of tobacco, which appears to be a remedy resorted to, by the natives of the Spanish Main. The first case was that of a free negress, 40 years of age, who, having been cupped on the temples, with a blunt pen-knife and small calabash, became affected with trismus. Her pulse was accelerated, and there was some perspiration on the neck and chest. She was seen two days after the appearance of trismus. Dr. A. directed a strong decoction to be made of the fresh leaves of the indigenous Nicotiana Tabaccum, with which the jaws, throat, and chest were to be fomented for half an hour at a time. Then cataplasms of the same were to be applied to the jaw and throat. The warm bath, into which a quantity of the tobacco decoction had been thrown, was also administered every three hours, and a glyster of the same decoction to be thrown up every twelve hours. The bowels were ordered to be acted upon by calomel and gamboge pills. The usual effects of tobacco were produced, though not so decidedly as might be expected. Relaxation became general, the bowels were opened. The symptoms of trismus remained stationary, for two days under this treatment. On the third day the jaw relaxed a little, and by perseverance in the plan, she recovered perfectly, though very slowly.

The second case was that of a negress also, who had one of her hands wounded by a barbarous husband, and this wound was followed by "convulsive startings of the arm." The same plan of treatment was pursued as in the former case, and the patient got rid of her startings. It is obvious that this case could not, with propriety, be called either trismus or tetanus. The first case was simply trismus, and, therefore, we know not why Dr. Anderson should entitle his paper—"On the Use of Tobacco in *Tetanus*." There is just barely enough of evidence here to authorize a further trial of the remedy, but nothing to engender sanguine hopes of its success.

Here we must stop for the present. For, in works of this kind, composed of various parts entirely unconnected, no inconvenience whatever is produced, even were the analytical articles as numerous as the papers in a volume of Transactions. As the design of this Journal is to give a copious and clear analysis of every work reviewed, so our readers must have patience, and not expect to have every thing at once, piping hot from the press. It is better to have a few dishes well cooked, than a medley of fragments—"the ends of all things."

[To be continued in our next.]

VI.

Pathological Observations on the Rotated or Contorted Spine, commonly called Lateral Curvature, deduced from Practice. In which are shown the Causes that produce it; the Reason of its being mistaken for an Incurvation of the Spinal Column; and the Means best adapted to its Prevention and Cure; agreeably to the principles laid down, and the Author's Experience. By Andrew Dods, M. D. Late of Edinburgh, and Surgeon in the Royal Navy. Octavo, pp. 239. London 1824.

Within the short period of twelve months, the pages of this Journal* have contained detailed accounts of two standard works on the subject of *Lateral Curvature of the Spine*, and our attention is now called to a third on the same subject, possessing many claims to our notice. The literary history of every science, and more especially of medicine, shows, that one book (if really read or worth reading) on any given subject, is almost sure to produce others, even although there existed no sufficient grounds for the first parent of the race. In the present case, however, there can be no doubt that ample reasons may be found for the appearance of all the works alluded to, independently of any motives of imitation, emulation, or opposition. In the first place, the disease, to the consideration of which these volumes are devoted, is one which, as well from the various distress produced by it, as from the great difficulty of curing it, must be allowed by all acquainted with it to be of the very first importance; in the second place, it is a melancholy but undoubted fact, that this disease has amazingly increased in frequency of late years, and now prevails to a most appaling extent; thirdly, it must be admitted that much difference of opinion, and many erroneous notions, both as regards the nature and proper treatment of it, have long existed, and still exist among medical men; and, lastly, it is but doing simple justice to the authors of the works indicated, to declare, that *all* of them have presented important information respecting the matters treated by them. To the merits of the authors of the works formerly reviewed, we hope we have done sufficient justice, in giving in our pages an epitome of their doctrines, with the commendations to which we considered them entitled.

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* See Review of Ward in No. 12, and of Shaw in No. 16.

In the present article, it will be our endeavour to mete out to the author of the work before us the same impartial justice. Although, in one respect, the little work of Dr. Dods contains more original pathology than either of the others, its main strength certainly lies in the full and forcible exposition of the *causes* of the disease, as existing in the present fashionable modes of education. Its style is more popular; and, on this account, as well as from the nature of its subject generally, it is much more calculated for the general reader than either the volume of Mr. Ward or Mr. Shaw. In making this statement, however, it is only doing justice to the author to add, that in no one instance does he appear to have forgotten the proper dignity of his rank, or to have gone out of the way to court the attention of extra-professional readers. The book is certainly diffuse, and in some places declamatory; but these blemishes of manner are evidently the consequence of the author's profound conviction of the vast importance of his subject—of a commendable earnestness in the cause of nature, truth, and humanity—and of a pardonable enthusiasm in the support of doctrines which he considers as at once original, and of the greatest moment to the welfare of mankind. Indeed, we are not sure whether these very defects may not be calculated to advance its popularity and increase its usefulness, among that class of readers whom the subject most nearly concerns—viz. the parents of the rising generation of females; and to all of these we most earnestly recommend it, as a work containing information and advice, of which they ought to be neither ignorant nor regardless. It is only by opening the eyes of parents and teachers to the extreme frequency of this disease, and by holding up to them the picture of its miseries, its causes, and the means of prevention, that any rational hope can be entertained of checking its fearful ravages. These expressions, perhaps, may seem unnecessarily strong to such members of the profession as, from particular circumstances, have not been led to see much of this disease; to those, however, who, are fully acquainted with its character, and who, like ourselves, have had occasion to deplore, for many years past, the silent inroads it has been making upon the vigour or beauty of one or other of the daughters of almost every family of our acquaintance—our language will not appear unmeasured. In truth, we are sometimes disposed to go so far, on reflecting on this subject, as to doubt whether even the giant malady of our land, *consumption*, is to be considered as more terrible than the one under consideration! Consumption, it is true, is daily and hourly seen decimating the ranks of youth and beauty, and dooming thousands and ten-thousands of its interesting victims to untimely graves—unchecked and almost unopposed by medicine. In this case, however, the period of disease is generally short, and the sufferings of the patient inconsiderable ; the malady being chiefly terrible from the desolation and misery it produces in the breasts of surviving friends. Spinal disease, on the other hand, while it rarely kills, is productive of the greatest suffering, (we do not mean *pain*) both physical and moral, to the miserable subjects of it. While still preserving the aspect and the feelings of health, (as often happens) they are hardly capable of enjoying any of the pleasures, or of performing any of the duties, of active and social life : and happy, certainly, would it be for many of them, if, like the victims of consumption, they " might die and be at peace," instead of dragging on a painful and useless existence from year to year, " dying every day they live." It is, truly, at once a melancholly and appaling consideration, how large a proportion of the young ladies of the present day, who are fashionably educated,—whether at boarding schools or under the domestic roof,—are the victims of some degree or other of this affection : and, in reflecting upon this, we cannot help being struck with the humbling lesson which is thereby read to the pride of man. Is, then, all our boasted intellectual cultivation of the present day, and our mental superiority over former times, purchased merely at the price of our physical perfection ? Is such the poverty of our common nature as to be unsusceptible of the simultaneous and coequal cultivation of both its parts ? Is knowledge a weakness ? Is genius a disease ?

One thing at least is certain, not only that the bodily vigour of the females of the upper and middle classes of society has been materially injured by the fashionable modes of instruction that have now for many years prevailed.—but that even the general health of the present generation in England, has suffered most grievously from the increased diffusion of education among the people : and it seems to us a question worthy of the gravest and most mature consideration, whether the sum of human happiness, virtue, and social usefulness, has or has not increased proportionably.

In asserting the so general prevalence of this form of spinal disease, we think it necessary to add that, hitherto, it has almost constantly been overlooked or mistaken by the generality of practitioners, as well as by the patients themselves ;—the various symptoms produced by it being considered either as idiopathic affections, or as the consequences of other and more familiar diseases. And it is in respect of the earlier symptoms of this disease, and indeed of its *general* symptoms at every stage, that we consider all the works hitherto published on the subject as particularly defective. Had we space or time, on the present occasion, we think we could sketch a brief outline of the more characteristic features of this malady, as manifested in the state of the general health, even in the earliest stages, which might be useful to our junior brethren; but, perhaps, we shall be considered as more legitimate members of the ancient craft of criticism by indicating, rather than supplying, the omission of our authors. The want of such knowledge is sufficiently evinced by the oversights and blunders constantly observed in the practice of these *ontologists* (as Broussais calls them) who look upon diseases as mere collections of symptoms, and recognise no collection as such, that is not set down in the catalogues of Sauvages or Cullen. How frequently, for example do we meet with weakly women who have been treated—perhaps for years—as the subjects of some chronic inflammation of one or other of the abdominial, pelvic, or thoraic viscera, (according to the site of the pain,) by leeches, blisters, issues, *&c.* or who have been considered as purely nervous, or simply debilitated; or as labouring under a local disease of the joints or muscles of the extremities; but whose ailments were altogether the consequence, immediate or remote, of this form of spinal disease?

We shall now proceed to give some account of the work before us, confining our attention principally to such parts of it as contain any thing novel in pathology and practice, and passing over such views and doctrines as we have already discussed in our previous articles on the same subject.

In his First Section, entitled "Introductory Observations on the Rotated or Contorted Spine," the author takes a general view of the opinions entertained by preceeding and contemporary writers respecting the nature of the disease usually known by the name *Lateral Curvature* of the Spine. After showing that Pott was far from confounding this disease with the carious affection of the vertebræ so well described by him, he notices the views taken of it by Baynton, Lloyd, Wilson, &c. all of whom consider it as consisting of a lateral *yielding* or *giving way* of the spinal column, in one or more places, from local disease or debility of the yelding part; and then briefly unfolds his own pathology asserting boldly and unequivocally, in opposition to all former writers, that in this disease THE SPINE IS NOT CURVED AT ALL; or, at least, *is not at all unnaturally curved in its longitudinal direction.*

"I consider it to be an affection totally independent of any disease or diseased action, either in the vertebræ themselves, or in their connecting ligaments or cartilages, and that it is produced, in every instance, by a peculiar affection of the muscles of the back, which affection of the muscles does not, in my opinion, primarily, and necessarily, unnaturally crook or curve the spine in any direction, but ROTATES OR TWISTS it in the line of its axis; and that this rotation, or twisting of the spine, is, in itself, sufficient to explain, in the most satisfactory manner, all the phenomena of this important deformity." 30.

By this rotation or twisting of the spine in the line of its axis, there is exhibited to our view a *profile* of the natural curves of the column; and it is the unnatural exposure of these natural curves, our author maintains, that has occasionod the universal mistake respecting the true pathology of the disease.

In his Second Section the author enters, at great length, into the consideration of the remote and immediate causes of the disease. The immediate cause he considers to be an organic affection of the muscles of the back and trunk, produced by the improper exercise of their functions, arising principally from malposition of the body. He prefaces his examination of the various remote causes by an inquiry into the natural functions and healthy action of muscles. These consist essentially in alternate contraction and relaxation, the due and regular performance of both of which is necessary to their healthy condition. Either or both of these functions may be too much or too little performed for the sanity of the parts. The total disorganization of muscular substance from inactivity has been well illustrated by Mr. Shaw, (see our last number;) and is practically confirmed by the experience of our author. He seems, however, to consider a state of prolonged *contraction*, rather than mere inactivity, to be the great agent in disorganizing muscular fibre; and it is especially to the long-protracted contraction of the spinal muscles produced by malposition, that he attributes the origin of the contorted spine.

> "Position of whatever part of the body, if long continued, will certainly disorganize its muscles; and it matters not what position may be assumed. It appears to me, however, that this disorganization of a muscle is more the effect of its constant contraction than of its constant relaxation. For example, if we extend one of our limbs and keep it in that position, we shall find that it will be the extensor muscles which will chiefly suffer, that is, they will become permanently contracted, and probably never admit again of being fully relaxed. Whereas, if the limb be retained in the bent position, we shall find that it will be the flexor muscles which will be so affected. While I state this, I admit, at the same time, that a muscle's power of contraction may become much or wholly impaired, from its being kept constantly in a state of relaxation. Yet I am of opinion, that it will bear this state for a much longer period, and with much more ease and safety to the person, than it will do that of contraction." 73.

In applying this fact to the case of the spine, he makes the following observations:

> "Man was certainly formed to walk upright, but it was decreed him likewise that he should bend his back; and he who fails to do so shall not go unpunished for his disobedience. It is the want of this simple motion of the body alone, the want of the wholesome and necessary interchange of contraction and relaxation in its muscles, or, in other words, the improper performance of the function of the spinal muscles, that is contorting so many of our young females in the present day, and until the practice ceases of teaching them to keep their bodies so much in the erect position, and the means every where imposed upon them now to effect it be wholly abolished, their numbers will still increase.
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> "But how much do we see this wholesome and necessary interchange of contraction and relaxation in the muscles of the spine abused, and even denied to children by every possible means! The importunate cry and appalling threats of a mother or tutor, aided by the painful restraint of some favourite instrument, deprive them of it through the long and wearisome day, while the very beds in which they lie down to repose at night are carefully constructed to prevent it." 56.
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> "The causes, then, of the organic disease of the muscles of the back, which I have said produces contortion of the spine, may be briefly stated to be whatever shall, by retaining the body in the erect or extended position, keep them too much in a state of contraction, and prevent in them the necessary interchange of relaxation; whether this shall be occasioned by the voluntary effort of the child itself, to obey the importunate cry of its mother or governess, *to keep the head up and shoulders back*, or by any of those painful instruments which are so much used now for this purpose." 72.

In proof of the correctness of his views of the general causes of this disease, the author adduces the well-known fact of the comparative immunity of boys generally, and of both boys and girls among the labouring classes, from this deformity. And indeed this proof is quite conclusive; although we find Dr. Harrison, with astonishing simplicity, bringing forward the general straightness of the labourer as a proof that the cause of curvature does *not* exist in the muscles!

These effects of irregular action of muscles from malposition, or too long-continued position of the body, are increased by the pressure on the muscles of the trunk by means of stays, &c. which, like the bandages on a limb, tend directly to produce extenuation of the muscles. There can be no doubt of the truth of this observation; although we have often heard adduced by our fair friends as a conclusive argument against it, the fact, that their grandmothers were not (by our own showing) distorted, although *they* wore stiffer stays than is now the mode. To this we would answer, that the very different habits and circumstances and constitutions of our less polished ancestors enabled them to resist the ill effects of these unnatural supports, much better than their degenerate posterity. Had they also, like the female youth of the present generation, (in place of being permitted to romp with boys, and enjoy at once the benefit of air and exercise, contented with only a *moderate* acquisition of knowledge,) been trained from infancy to curb the natural action of their muscles, "cabin'd, cribb'd, confined," in boarding schools from morn till night, "deprived of the common air and common use of their own limbs," and perched hour after hour on high stools, or *education chairs*, reading, writing, painting, playing, &c. &c. we apprehend that their "*circum pectus et æs triplex,*" in place of giving additional support, would have precipitated their decrepitude.

"The progressive effects produced upon the muscles of the back, from the continued application of the causes mentioned, which is the disorganization spoken of, are, in the first place, debility; secondly, a wasting of their substance; and, lastly, permanent contraction of their fibres.

"If continued position, then, shall disorganize the muscles of the human body in the way I have stated; and, if this disorganization of the muscles, when it takes place in those of the back, shall contort the spine in the manner hereafter to be shown, it becomes a matter of the greatest importance to inquire whether the several modes and customs adopted now, during the education of the female youth of this country, for the prevention of this distressing malady, be not the cause of it; and this, I think, will appear evident, from the following considerations.

"1st. That all the means made use of now, for preserving the figures of young girls, and preventing contortion of their spines, from the cry of those who have the care of them, *to keep themselves erect*, or the common stays, down to the reclining board, or school-room floor itself, tend to keep their bodies in the extended position.

"2ndly. That the bodies of children being kept in this manner constantly extended, the extensor muscles of their spines are kept, consequently, in a state of constant contraction, and are seldom or never allowed the interchang of relaxation, which is an indispensable part of their function.

"3dly. That all the muscles of the body being subject to the same laws, and liable to become affected from the same causes, the muscles of the spine will suffer disorganization from continued position, in the same manner as those of other parts of the body.

"4thly. That the effect of disorganization of muscles, is always distortion, to a greater or less degree, of the part or member to which they belong, and which they are destined to move.

"5thly. That contortion of the spine is found to prevail a hundredfold amongst the children who make use of these means of prevention, than it does amongst those who do not. Hence its frequency amongst the children of the rich, and its unfrequency amongst the children of the poor; and hence, also, its frequency amongst girls, and its unfrequency amongst boys, even although of the same family.

"6thly. That contortion of the spine has evidently increased, in proportion as the adoption of these means of prevention have been diffused throughout this country." 80.

In section third the author treats "of the manner in which the rotation or contortion of the spine is produced, and the reason of its being mistaken for an incurvation of the spinal column." It is in keeping in view the natural structure of the spine, and the attachments and action of the various muscles, and in considering the disorganizing effect on these muscles, of the habits above-mentioned, that we find an explanation of these various points. For a full account of these we must refer to the work itself, and content ourselves here with a brief outline of the author's doctrines. This we shall endeavour to give in his own words.

"For the accomplishment of the different motions of the spine, there are many muscles, some to regulate the movement of each individual vertebra, and others that of the whole column; and although its general motions depend upon the *tout ensemble* of these, yet there are some on which the force more particularly falls, and which I consider to be principally concerned in contorting the spine, but I have no doubt many more contribute. The muscles I allude to are what are generally called the *long extensors* of the back, viz. the sacro-lumbalis, and longissimus dorsi, with the quadratus lumborum." 85.

"It is evident, then, that as these muscles are inserted into transverse levers, they become muscles of rotation as well as extension. For example, if the extensor muscles on both sides of the spine be thrown into equal action at the same moment, the motion produced will be direct extension of the column; but if they be thrown into action only on one side, the spine, although made to incline in the direction of the muscles' forces to that side, will be moved by means of the rotatory movement of the vertebræ."

"If the extensors of the spine, then, from being inserted into transverse levers (the transvers processes of the vertebræ,) be constituted muscles of rotation, when they act on one side only, it will follow, that should disorganization, producing contraction, take place in those of one side, the effect of this contraction, by its overbalancing the action of their fellows on the opposite side, will be to rotate the vertebræ to which they are attached, and destined to move; and, consequently, to produce rotation or contortion of the column, and not curvature." 88.

The obvious result of this rotation will be, as already said, to bring the natural flexures of the spine, which in the sound condition of the body are concealed, into view in the back; and it is merely these natural flexures thus unnaturally exposed according to our author, which have hitherto been universally considered as morbid flexures of the vertebral column. The same rotation, it is said, explains every variety of alteration of shape in the bony parietes of the chest, so conspicuous in even the slighter degrees of this deformity. These original pathological views of the author are at once strikingly illustrated and confirmed by the account of the circumstances which first led him to adopt them.

> "Having been induced, of late years, to apply myself more particularly to the investigation of this interesting deformity, and being previously convinced, in my own mind, that it depended more upon muscular contraction, brought on by the fashionable modes and customs of the day, than upon structural disease of the vertebræ, I was led to the adoption of friction for its cure; and in order that I might give it the fairest trial possible, I was induced to become the operator myself.
>
> "During the course of my operations upon several patients, I was struck in all of them (for they were all contorted to the right side) with a considerable bony hardness and projection on the left side of the loins, raised nearly to a level with the spinous processes; and this I found to be the case in the patients whose spines exhibited little or no apparent curvature in the loins, as well as in those in whom the apparent curvature was very great. Being led to investigate this anomaly, I redoubled my exertions to discover the cause; and I found, after the muscles had been relaxed by friction (for they were in every case extremely rigid,) that the bony projection was the transverse processes of the vertebræ of the loins, whicc I could now as distinctly feel and count as the spinous. From this circumstance, I was led to examine whether I could feel the transverse processes of the same vertebræ on the opposite side, but without effect, for they appeared to have sunk inwards, completely out of reach. Having satisfied myself of these facts, I then reasoned in the following manner.
>
> "If these distortions of the spine, as it is generally supposed, depended upon a direct lateral curvature of the column, the transverse processes, although they would be, in this case, separated from each other on the one side, and approximated on the other, yet would they not be altered in their transversity, with aespect to the body, and consequently ought to be as easily discovered and felt on the right side as on the left, but which I found was not the case. I then asked myself what movement of the vertebræ would bring their transverse processes to be so prominent, and so distinctly felt on the one side, while they were totally out of reach on the other, and I concluded it must be their ROTATION." 102.

For farther pathological details on this point, we must refer to the work itself, expressing our full assent to the truth of the principles maintained by him. A most unsuspected and unequivocal testimony of their truth is furnished by Mr. SHAW in several passages of his excellent work, where the effects of the *rotation* contended for by Dr. Dods, are clearly and explicitly described, although without any intimation on the part of the author, of their dependence on this particular pathological state. To the merit of this discovery Dr. Dods seems exclusively entitled. See, for instance, pages 69, 113, 117 of Mr. Shaw's work.

In his fourth and last section, Dr. Dods treats "of the prevention and Cure of the Rotated or Contorted Spine." Under the head of Prevention, he once more passes in review the whole system of fashionable education, and utterly proscribes every plan and all sorts of apparatus adopted with the view of keeping the body straight, but with the direct effect of producing distortion. In this list of proscription he includes—position, education chairs,—stays,—backboards,—stocks for the feet,—inclined planes,—lying on the floor, &c. &c.; the only practice that escapes condemnation being *drilling*, and this is considered safe only where the others are *not* enforced.

"When we come to survey this long list of instruments, and the means so universally used now for the fashionable man's children, we cease to be surprised at their bodies being so frequently and miserably deformed, and only wonder how it is that so many escape this calamity.

"It affords us a striking example, I think, of the wonderful efforts of nature to resist the effects of such pernicions instruments; and I consider those children who are reared now to maturity under their use without being contorted in their spines, only as so many miraculous instances of escape." 150.

In place of all this machinery, and care, and artificial restraint, the author recommends that the plain and simple dictates of nature should be followed in the education of children, justly believing with the poet, that

"God never made his work for man to mend."

"To prevent children from being mutilated by this cruel deformity, let those who have the care of them cease to restrain the position of their bodies in any manner whatever. Let that *attention du corps*, that mania, for it deserves no other name, for training them to sit constantly erect, be wholly laid aside: let the cry of *hold your head up, and keep your shoulders back*, be as seldom heard in the chambers of the splendid mansion, as it is in the lowly cottage; and let all those vile instruments and means so much now in use amongst children which I have mentioned, and others which may have escaped me, no longer find a place in the dwellings of the wealthy. Let children, while nature is yet maturing their tender bodies, be wholly unfettered; let no stays (for they require none) be imposed upon them, neither let them be trained to constant observance of any particular position, but let them have a comfortable chair or seat, with a back to it, such as I have described, to sit down upon when they feel disposed, and let them lean to the back of it, for it is beneficial that they should do so. And, should their frames be, delicate, let them be indulged with a sofa when they are inclined to rest their wearied bodies; but let them not be stretched out upon it in the manner they now are, upon an inclined plane, for it will only increase their debility; but let them lie with their heads raised, and their bodies and spines gently bent, or in whatever other position nature shall instinctively point out; for, rest assured, it is the only way to relax their wearied and contracted muscles, and recruit their exhausted strength. Let them not be penned up in the house all day, trusting only to the exercise which their muscles and bodies shall receive at the command of a drill-sergeant, to preserve them in health, and prevent them from becoming contorted in their spines; but let them sally forth, two or three times a-day, to breathe the open air, and exercise, with vigour and activity, their stiffened limbs; and when they do so, let them not forget that their spines have joints, and muscles to be moved and exercised as well as their limbs. Let them be permitted to toss a ball, or some such thing and pick it up from the ground when it falls, that their spines may be used in the manner that nature intended. Let their bodies be bent forwards and extended, and extended and bent forwards again, for it is by this simple motion of their bodies alone, that their spines will be preserved in health and strength, and retain their symmetrical and natural form; the neglect, or rather the denial and prevention of which, is the principal, nay, I would say, the only cause of all this deformity now in our land. And, when they return home from such an innocent and healthful sport, let not its wholesome and sanative effects be done away with, by placing them immediately upon a music stool, or education chair but let them sit down to rest themselves, for half an hour or longer, if it shall be required, upon a comfortable seat, in the manner I have recommended, to recruit the muscular strength and energy which have been expended in their little sportive exercise, when they will again return to their scholastic duties, cheered in their minds, and refreshed in their bodies." 156.

For the details of the plan of cure, we must refer to the original. The disease being the consequence of muscular contraction, the cure is to be effected by producing relaxation of the contracted parts, in the first place; and then, by proper exercise, restoring them to a requisite degree of tone and activity. As might be expected, Dr. Dods condemns all mechanical means and instruments in every stage of the complaint, —with the exception of friction and manipulation, and a simple contrivance to exercise the muscles of the spine. He appears to entertain a horror of all kinds of instruments; and we have reason to believe, that this horror originated from observing the ill effects of these, on a large scale, in a spot long celebrated for their employment as the chief means of cure in such complaints.

The following paragraph contains a brief summary of the author's mode of conducting the cure, and is all that our limits will permit us to extract.

> "My patients being provided with, and dressed in flannel dressing gowns, open to the back, and petticoats, I desire them to lie down upon their faces on the friction bed, in the manner described. I then besmear the back well with the prepared oil mentioned, and make use of strong frictions to all the muscles of the spine, but particularly to those which are most contracted; and at the same time I use manipulation, at intervals, to the displaced bones, This process I continue about twenty minutes or half an hour at a time, and repeat it twice, and in some cases three times a week. If the friction be applied in the evening, the patients are desired to go immediately to bed, in which I order them to lie for some time on their backs, with their heads and shoulders raised a little, and their bodies gently bent, in order that the muscles of the spine may be kept in a state of relaxation, which such a position of the body admits of, and which is quite agreeably to nature's laws. If the friction be applied during the day, instead of sending my patients to bed, I desire them to lie down on their backs upon the relaxing couch, for an hour or so before they dress themselves, and afterwards to resume the couch. This couch they continue to occupy daily, instead of sitting up upon a chair. But as I do not confine my patients constantly to this position, so I direct that they get up frequently, and exercise the muscles of their spines for a quarter of an hour, or twenty minutes at a time, by means of the shoot and balls described, and to resume their couch again immediately after the exercise. I allow my patients likewise to rise to their several meals, and to seat themselves in a chair, such as I have recommended; but if it pleases them to have one with arms, I have no objection to it. I do not allow them however, to sit up more than half an hour at each meal, when they again return to their couches." 221.

We must here take our leave of Dr. Dods, earnestly recommending his little work not merely to the members of the profession, but to all parents and guardians, and indeed to every one who is at all interested in the education of youth, or in the welfare of the rising generation. We congratulate the public on the prospect now opened to it, of seeing rescued from the rude hands of empirical machinists and ignorant rubbers, a class of diseases as distressing in their nature, and as much requiring for their treatment and cure, a scientific knowledge and application of the principles of medicine, as any in the range of nosology.

P. S. Dr Jarrold's work on the Spine reached us just as the above article was closed. We hope to give some account of it in our next number, as it appears to us to contain some important information.—*Rev.*

VII.

Essay on the Effects of Iodine on the Human constitution; with Practical Observations on its use in the Cure of Bronchocele, Scrophula, and the Tuberculous Diseases of the Chest and Abdomen. By W. Gairdner, M. D. Octavo, pp. 64. London 1824.

Since we noticed the subject of Iodine, in our Number for March 1823, (Vol. III. p. 757) in the most comprehensive memoir that had, at that time, been laid before the profession in this country, with the exception of a few meagre cases in the public journals and transactions, and the unsatisfactory trials detailed in Dr. Baron's book, (see same Vol. p. 785) little additional infortion has been given to the English public respecting this powerful medicine. Since that time, we have ourselves used it—and seen it used—much; and we have had access to the records of a continuous and extensive practice with it more especially in cases of bronchocele, by a physician resident in the western parts of Sussex, where the disease is particularly prevalent.

With these various stores of knowledge in our possession, we must confess that the pamphlet of Dr. Gairdner has appeared to us somewhat meagre and unsatisfactory, possessing not much original matter that could entitle it to claim the notice of the profession, and presenting what it does possess, in a manner that is neither very perspicuous nor interesting. Indeed, to such as have read our article above alluded to, we are not sure that the Essay of Dr. Dr. G. will convey much new information; but as it certainly contains a general account of the mode of administering this remedy, and of the cautions necessary during its administration, in an accessible, if not a very lucid form,—and as we have reason to believe that the employment of this medicine is much on the increase,—we feel it our duty to recommend the work to all those who are disposed to try the remedy, and who are not already in possession of any other guide. It is especially as exposing the dangers to be apprehended from the incautious use of iodine, that we consider this pamphlet as at all likely to be useful, —and it is under this point of view particularly, that we would recommend it to the noitce of the reader. "Certain statements (says Dr. G.) have gone forth to the world of the great benefits to be derived from the use of idoine, while the history of its dangers has been most unaccountably withheld. It is in order to fill up this hiatus, and at the same time to direct particularly the attention of practitioners to the proper manner of using it, with a view to its good effects, that this Essay is written."—*Introd. p.* vii. To page 763 of our third volume, we beg to refer for a concise statement (from Brera) of the poisonous effects of iodine when incautiously administered; and we are sorry to be obliged to add that, with the single exception of any fatal event, we have repeatedly witnessed nearly all the effects there mentioned, in our own practice. In fact, we are anxious here to state decidedly and explicitly, as the result of personal observation, that iodine is a most powerful modifier of the phenomena of animal life, but, at the same time, a most dangerous, and (were it not for the hopes we entertain, that some safer rules for its administration may yet be discovered) we would add, most untractable medicine. Our employment of it has principally been in cases of bronchocele, in the speedy dissipation of which, whether taken internally or used externally, its powers are most strikingly conspicuous; although we must add, that, in the doses we have found it safe to give, the dispersion of the tumours has generally required much longer time than is stated in the Memoirs of Coindet, and in the work before us. In many cases, we have certainly found a very remarkable diminution of size within the first fortnight; and in some very slight examples, the swelling has totally disappeared within the first two months: but, generally speaking, in large and old cases, several months have commonly elapsed before any very material impression has been made; and, in more than one instance, twelve months have passed away, under the almost constant use of the remedy, before the disease has been completely eradicated. In several instances, indeed, after proceeding favourably for some time, all farther progress has been interrupted notwithstanding the continual application of the former means; while, in others, the speedy supervention of bad symptoms has caused the treatment to be repeatedly stopped, and finally abandoned, when only small progress had been made towards the dispersion of the tumour. Of the two modes of using the iodine, viz. the internal and external, we are disposed, on the whole, decidedly to prefer the latter, more especially in the cure of bronchocele; although we can assert, from considerable experience, that it produces its peculiar deleterious effects on the system quite as certainly, though, perhaps, not so readily in the one way as the other. These effects are sufficiently well described in the pamphlet before us, as, also, in the works of Coindet and Brera formerly reviewed. Those more commonly observed by us have been—head-ach—pains in the limbs and stomach, with ravenous appetite—palpitation of the heart, with great restlessness and nervous flurry—general tremors—general debility—permanently quick, strong, and hard pulse, with great emaciation, &c. In one or two cases we have had reason to suspect the supervention of organic disease of the heart (hypertrophia) as a consequence either of the direct stimulus imparted by the medicine to this organ, or of a sort of transference of nutrition to it, from the decreasing thyroid. All these effects we have witnessed from doses of the medicine much smaller than those recommended by the present author, and most others who have written on the subject as well in this country as on the continent; and we have no hesitation in asserting, that a considerable experience of the effects of it, *when genuine*, will convince any one that the doses above alluded to are much too large for safety. We have said *when geuine*, because we believe that this, like most other concentrated chemicals, is rarely to be had in a pure or trust-worthy state from common chemists. The medicine used by us has been uniformly manufactured by Mr. Battley; and we can confidently recommend the various preparations of it by that scientific chemist as entirely to be depended on, at least for purity and strength. In our first trials, we used much larger doses than we now deem safe; and although, in some few cases, we found the system but little impressed by it, we soon felt it necessary to administer it with a much more cautious hand. The preparations commonly used by us have been, for internal use, the tincture, the solution of the hydriodate, and the ioduretted solution; and externally, an ointment made either with the simple iodine, or with the hydriodate. (See Med.-Chir. Rev. Vol. III. p. 761.) Of the liquid preparations, we now consider it unsafe to give more than from five to eight drops three times a day, for a maximum dose; and we limit the use of the ointment to one application daily, or every other day. It is no doubt, true, that doses three, four, or five times as large as these may be given, in most cases, with apparent safety for some time;—and in some cases, we know, with actual safety, for a long time;—but we decidedly re-assert it, as the result of our experience, that these large doses of *the genuine drug* cannot be given generally without the greatest danger; and we conjure the younger and more zealous portion of our readers, rather to forego entirely the use of the remedy than to administer it in such quantities as we know they will ultimately repent of.

In arguing from the old medical adage "nil prodest quod non protest lædere idem," we ought to expect much benefit from the use of iodine; and we confess that we are very unwilling to forego the hope of this benefit being eventually secured to medicine, by the farther prosecution of the subject of its mode of acting on the living system. It is to this point, more particularly, that we would beg leave to direct the attention of practitioners; as, until more precise rules for its administration are established, we are convinced that its general adoption into practice will be infinitely more injurious than beneficial to humanity. We dwell the more on this, as we have reason to believe that we ourselves, by our former reviews, have been the means of leading many to adopt the use of iodine; and because we fear that the direction given to its employment in Dr. Baron's late work, is likely to tend to an extension of its use in a manner that must prove injurious in the highest degree. So far, indeed, from iodine being generally useful in cases of phthisis pulmonalis—at least, in the large doses recommended—we are convinced that it must tend directly to precipitate the progress of that almost or altogether incurable malady; and we here loudly enter our protest against its employment, in this and other internal diseases, until such times as its virulence has been tamed by an improved mode of administration, and its powerful influence on the system rendered subservient to the removal of disease *only*. It is indeed true, that it is only by trials on the human subject, that the real value of this or any other medicine can be ascertained; and it must be admitted, that it is in such hopeless diseases as consumption that such trials may with most propriety be made; at the same time, as no man could be justified in hazarding unnecessarily the present degree of vigour of his patient, we would recommend all experiments with iodine in internal diseases, and especially in phthisis, to be made with extreme caution, and with very minute doses of the medicine.

The following extracts from Dr. Gairdner's pamplet will illustrate this subject still farther.

> " Some time after the introduction of iodine into practice, a few cases of severe spasmodic affection of the stomach and bowels occurred. They were attended with violent and incessant vomiting, excruciating pain of stomach and bowels, strong spasms of the back and legs. The tongue was commonly furred, and the bowels sometimes violently purged, at other times obstinately constipated. The pulse was generally extremely frequent, small and depressed—the eyes sunk and hollow—the countenance ghastly and pale. These accidents were usually imputed by the patients to the iodine they had taken. The physicians by whose advice the medicine had been given, would not allow this origin of the disease, till a repetition of similar cases determined that the sufferers were right. The vomiting, pain of the bowels, and the cramps of the legs, are extremely severe. They are also with the greatest difficulty allayed, con-

tinuing sometimes for many days, and renewed during weeks, and even months, after taking food. The legs sometimes swell in the first instance, and afterwards become rapidly thin and meagre. There is another symptom, which, though common to almost all diseases, is peculiarly the sign of this. The emaciation which attends this irregular action of iodine is so rapid and so extreme as to strike terror into the minds both of patients and physician." 7.

"There is an effect of iodine which is so extremely commmon, when the remedy has been pushed to an overdose, that it deserves to be noticed at greater length. The anxiety and depression of spirits are so great and persevering as to warrant my considering them as the peculiar effect of iodine, and not the consequence of the great debility which attends the violent and inordinate action of this medicine on the constitution. It is an affection very different from hypochondrical melancholy, inasmuch as it dwells principally on the present and has no reference to the future. Patients have generally described it to me as a sense of sinking and faintness, which were peculiarly oppressive, and I have heard them complain of it while suffering the most intense pain, as the part of the complaint which was yet the most difficult to bear. This symptom is an almost constant attendant on the violent action of iodine on the system, and frequently makes its appearance in a lesser degree when the medicine acts in a kind and salutary manner." 13.

"The nervous and muscular systems are peculiarly exposed to the irregular action of this medicine. In certain persons, indeed, of peculiar habits of body, it cannot be exhibited so as to affect the constitution in any manner, without in some shape or other producing unpleasant nervous symptoms, such as dimness of vision, indistinct hearing, fallacious touch, insomnia, breathlessness, palpitation, and all the countless forms of inward nervous derangement. But the symptom to which we shall more particularly confine our attention, is a degree of tremor which generally comes on when the patient is under the full constitutional influence iodine. This symptom may be reckoned a good gauge of the degree of nervous excitement which has taken place, and it is seldom or never absent when that excitement has proceeded to any considerable degree. It generally begins by a slight trembling of the hands, resembling that which take splace from the poison of lead; and if the medicine be incautiously continued, the larger muscles of the arms, legs, and back become affected. When in this state, the patient can with difficulty walk, and his progression is a tottering uncertain motion. He cannot carry any thing straight to his mouth, but the hand moves in a zig-zag manner, and with difficulty arrives at the mouth at last. This complaint is generally attended with a hurried circulation, and a small thready pulse. There is commonly great suffering at stomach and confined bowels. When nervous affection first appears the medicine must be most diligently watched, and if the symptoms seem to increase, its use should be instantly put a stop to. If rashly persevered in, the symptoms I have described above will certainly be excited, and then it is vain to withdraw the medicine; the complaint goes on progressive for weeks and months, even though its exciting cause be abstracted; and when it does at last begin to diminish, the amendment is so slow and gradual that the patient is scarcely conscious of the relief he receives. I saw two cases of this kind with Dr. Peschier of Geneva, in which the patients had suffered more than twelve months, and yet their sufferings had undergone little mitigation. It is of some importance not to provoke a complaint with so much difficulty allayed; and no one who has not seen it can have an idea of the slow and imperceptible degrees by which it steals on the patient. Its first advances generally escape his observation as well as that of his physician. A slight trembling of the fingers, quivering of the eyelids, occasional subsultus of the tendons of the fingers, arms, and legs, are generally the first symptoms observed, and it behoves us to be constantly on the watch for them. I have always obliged my patients to raise an empty glass or any light object to the head. By this means the smallest degree of unsteadiness in the hand will commonly be detected. I recommend a light object to be used for this purpose, because a heavy one tends to give steadiness to the muscles and to disguise the complaint." 16.

"The affection of the alimentary canal is plainly to be ascribed to the acrid operation of iodine on its mucous membrane. I have never witnessed it in any considerable degree when this medicine had not been taken internally. But I have seen slight pains of stomach, accompanied with copious bilious evacuations, attend its external use. These never proceed to the degree of violence which marks the internal exhibition. Indeed, it is rare to see them in any considerable degree disturb the comfort of the patient. It is not thus when taken in the stomach. I have never seen any disease of the bowels which more closely resembled the terrific descriptions given by the physicians of India, of the sufferings from the cholera of that country. Yet no medicine varies more in its effects than this. Some persons take it in large doses for a great length of time with perfect impunity; while others, from that peculiar undescribed and unintelligible state of constitution, called by physicians an idiosyncrasy, are speedily and violently affected by very small doses." 20.

"It is a much more difficult task to discover a probable explanation of the manner in which iodine disturbs the actions of the nervous system." 21.

Perhaps the undoubted, and indeed very obvious affection of the muncous membrane of the stomach and bowels, which exists both in the slightest temporary disorder, and in the most prolonged chronic cases, may be sufficient to account for most, if not all, the other symptoms, by means of the chain of pathological sympathy, which Broussais, more especially, has shown to extend from this centrical focus, embracing and involving every point, fibre, and function of the system.

Dr. Gairdner affords us little or no assistance in the cure of this most distressing factitious disease; and indeed this will not surprise them who consider the untractable nature of most of those affections which appear to have their site in the same organic texture, and to consist essentially in some analagous pathological modification of the living fibre. Under this head we would class numerous cases of *fever*, typhus and others—choleras—certain diarrhœas, dysenteries, and lienteries—a large class of affections usually ranked under the head of dyspepsia, biliary derangements, &c.—diabetes—certain cutaneous diseases, (so called,) &c. &c. &c. all of which, we have little hesitation in saying, are rather injured than benefitted by the prevalent modes of practice in England; and all of which, even under the most rational treatment, are found to be obstinate and unmanageable in the highest degree.

Our author, in these cases, recommends, in the first stage, opium, hemlock, or hyoscyamus, with diluting and emollient injections, and more especially the warm bath; these may give temporary relief. In the second, or chronic stage, when ulceration of the bowels has occurred, we believe that it is only by the strictest regimen, long continued, and aided occasionally by the mildest laxatives, that any essential benefit is to be looked for. In these particulars we are pleased to find our own experience coincide with that of Dr. G's; with the exception, however, of *bitters*, which we have found hurtful in every variety of the complaint.

> "I have tried various bitter and astringent medicines in union with opium, but have found them uniformly injurious during the first stage of excitement and exacerbation. Afterwards, when the disease has in some degree abated, this class of medicine will be found useful. I cannot too strongly caution my readers against the use of purgatives in such cases. However gentle they may be, their effect is uniformly and most decidedly noxious. In the first and acute period of this affection of the alimentary canal, it is almost impossible to quiet the disturbance which a purgative occasions. A remedy which ought never to be neglected is the warm bath. It will be found a most powerful coadjutor in restraining the violence of the spasms, and in moderating the perturbed action of the stomach."

Dr. Gairdner adopts the common opinion of iodine being a direct stimulant of the absorbent system—an opinion which seems almost entirely founded on its striking power in producing emaciation. This conclusion is clearly illogical, unless it can be shown that it does *not* produce any other effects on other textures or functions, by which the phenomena may be explained. One interesting fact, certainly favourable to his opinion, and which is new to us, is mentioned by the author—viz. the action of the medicine on the system being quickened by blood-letting. "Whenever the medicine is slow in its operation, provided the vessels be full and plethoric, I desire a little blood to be taken away from the arm, and I almost invariably find the action of the medicine much quickened. I have sometimes, also, thought that the cases in which blood was taken away, were cured more easily and with less suffering than others." 38.

For the mode of administering iodine we must refer to Dr. Gairdner's book, or to our own Review, already so often alluded to—cautioning our readers against the use of the large doses therein recommended. Dr. G's ointment is formed by rubbing up half a dram of the hydriodate of potass, with an ounce and half of lard; and of this half a dram is rubbed on the bronchocele night and morning. For internal use, he also prefers the salts to the pure iodine. He dissolves half a dram of the hydriodate in an ounce of distilled water, and gives of this at first ten drops, "augmented gradually to twenty, and, very seldom, to twenty-five."

Dr. Gairdner's little work concludes with some observations on the use of iodine in scrofula, phthisis, and mesenteric decline, in all of which he thinks very favourably of it. For his opinions and remarks, we must refer to the original. We cannot, however, help being struck with the unsatisfactory evidence on which both he and Dr. Baron seem to consider its efficacy as, in some degree, confirmed by experience, in the removal of internal diseases.

In conclusion, we would once more earnestly call the attention of our readers to the cautious study and use of iodine, with a view to the discovery of the particular action on the body, on which its beneficial effects depend; and with a view to the establishment of more certain and safer rules for its administration than we yet possess. At present, it is like arrows in the hands of a child, or like fire in the hands of a fool, more likely to do harm than good. Still, we are most unwilling to forego the expectation that its great powers may yet be rendered entirely subservient to useful purposes, as the arrows or the fire, when wisely directed. Whether this beneficial improvement is to be looked for to the modifying influence of other medicinal agents, to the diminution of its dose or to any other cause, we do not pretend to divine: whenever or however it is attained, we shall be satisfied. Our phrenological friends will be aware that even a large original dose of the propensities of *combativeness*, and *destructiveness*, is rather desirable than otherwise, as adding much to the usefulness and detracting nothing from the amiableness of a character—provided they are duly counterbalanced by a proportionate share of the milder sentiments: in like manner, we confess, that it is the very decided activity of iodine as a modifier of the phenomena of life, that makes us anxious to retain it among the class of medicinal agents, and leads us to hope that means may yet be found to turn all its evil to good—to strip it of its virulence without diminishing it of its vigour.

VIII.

Transactions of the Associated Apothecaries and Surgeon Apothecaries of England and Wales. Vol. I, pp. 424, with plates, 1823.

In preceding numbers of this Journal, we brought down the analyses of the various articles as far as p. 272, of the volume, and we now mean to embrace the whole of the papers from that to the end of the work, in our present number.

Art. I. *Observations on a Series of Cases of Inflammatory Diarrhœa, occurring in the Winter of* 1820-21, *and apparently caused by Congestion and Obstruction of the Liver, joined to an Irritated and Inflamed State of Mucous Membrane of the Intestinal Canal.* By C. T. **Haden.**

Mr. Haden observes that, in this country, bowel-complaints appear to occur under opposite states of the atmosphere, putting on a corresponding opposition of character. It is rare, he thinks, that they exhibit inflammatory symptoms in autumn; while inflammation forms, as it were, the essential character of those of winter. In the autumn, the violence of the vomiting and purging reduces the patient to a state of great weakness—in the winter, the inflammatory symptoms are too evident to be mistaken. Still he thinks the cause of both complaints is the same, though the symptoms and treatment vary. He thinks inflammation, or something akin to this, is at the bottom of all. As we can glean little from this paper, which is at all beyond the common run of observation, we must be excused from dwelling farther on it in this place.

Art. II. *Observations on Fractures of the Patella.* By **Robert Palk Mogridge** Esq.

Practical Observations on Fractures of the Patella and of the Olecranon. By **Thomas Alcock**, Member of the Royal College of Surgeons.

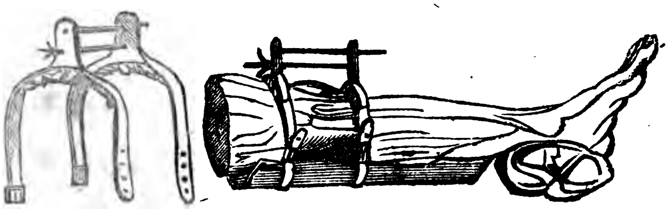
Mr. Mogridge being one day in one of the wards of St. Thomas's Hospital, a man was brought in with fracture of the patella. The dressers were proceeding to bandage it, on Sir

Everard Home's plan. A discussion took place, but Sir Everard's method was carried into effect.

"A wide tape roller was bound very tight round the limb above the knee, and the superior fractured portion of the patella; another below the knee, and inferior portion; under these were placed other slips of tape coming about two inches beyond each bandage, one on each side of the patella, one on each side of the knee, and one directly over the patella. The upper ends of all these were turned down and pinned to the superior bandage, then the inferior ends were pulled upwards as tightly as possible, so as to bring the rollers as nearly together as practicable, and with them the separated portions of bone. At first view I perceived that this could not answer, for the bandages themselves were tighter than the patient could well bear, before the bracing of the slips; therefore, we may at once say, that the more insufferable, the better the effect of this plan. By this mode of reasoning I therefore concluded, that the plan was bad, as it afterwards turned out, for the patient could not bear the torture, so that the bandages were loosened continually, and thus the effect destroyed; he always complained of extreme coldness in the extremity, which is not to be wondered at when the circulation must be almost stopped, and so much pressure on the nerves." 287.

Mr. M. now set about devising some better apparatus. He had heard Sir Astley Cooper remark in his lectures, that he did not doubt the possibility of osseous union of the fractured portions of patella, provided they could be held in contact for a certain time. In any instrument for this purpose, Mr. M. observes, there must be great pressure on the superior portion of the tibia and inferior portion of the femur, before the screw should act. The pressure on the ham too must be entirely done away with; for by preventing free circulation, the union is retarded.

"Both these difficulties I surmounted, by having a very thick splint made, so that the pressure should be on the calf of the leg and the thigh; by this arrangement the effect of the pressure becomes immediately reversed; it now does good, for, the more pressure you apply, the straighter the leg is brought, and without increase of pain. Having so far succeeded in obtaining the principles, I tried to apply them, and produced the instrument, of which I shall now give a description, accompanied necessarily by a sketch, together with the mode of its application.



> "The part of this instrument which presses on the knee is of highly tempered steel, with a well and hard stuffed cushion underneath, the leather strap covering it above: into this are firmly rivited the upright pieces, through which the screw and guide pass. No instrument can be more simple. I have given no plan for the splint, as it is but a thick common one. The method of applying it is by unscrewing the thumb-screw to its extent, then getting the portions of fractured bone between the instrument; apply the splint as represented in the annexed figure, buckle the strap around the limb and splint as tight as possible, then with the thumb-screw bring the instrument together. I have applied it on my own leg until I have held the patella as tight as if it had been squeezed by a blacksmith's vice. The great advantage of it is, that the patient wants no attendance after the first application, as he can tighten it himself, and I should think he can walk with it. The guide is absolutely necessary, as without it the screw could not work: it is merely a steel wire rivetted at one end, and passing through a hole at the other; nothing but lengthening the upright, and forming a hinge as a pair of compasses, could be substituted, and this would be inconvenient from the length. Mr. Smith, an ingenious instrument-maker, living at St. Saviour's Churchyard, Borough, made this instrument under my direction; he has one at present in his possession." 289.

As far as one can judge from appearances, and before the actual application of the apparatus to a case of fracture, the plan seems feasible. Beyond this we dare not go.

Mr. Alcock remarks that the serious evils attending fractures of the patella, when ossific union is not produced, and the discrepancy of opinion among eminent surgeons respecting the mode of treatment, render farther investigation of the subject necessary. Mr. A.'s attention was drawn to this accident by a case that made a deep impression on his mind at the time.

> "A man, in an humble and laborious station in life, had suffered the common fracture of the patella, from which he had so far recovered as to resume his employment; but the union of the fractured portions of the patella was not by osseous matter, but by a considerable extent of ligament; so that the broken ends were, after the cure (if cure it can be called,) far from being in contact. To those who have observed the effects of a ligamentous union after fracture of the patella, it need not be stated that this limb remained much weaker than before the accident, or than the opposite limb. One day, when carrying a load, he slipped; and laceration, or the tearing up of this ligament, occurred: he fell to the ground; and when the limb was examined, it was found that the ligament and the integuments adhering, were both torn across, exposing the cavity of the joint. The attempt to unite the torn edges of the wound did not succeed;—inflammation supervened;—amputation was subsequently performed; but it did not preserve the life of the sufferer." 291.

Our author witnessed another case nearly as distressing as the above. A female suffered fracture of the patella, which united by ligament. Some months afterwards the same accident happened to the other patella, with similar union. After a long confinement the poor creature was discharged, but unable to walk without crutches. We lately heard of a case with a very different result. A man had fracture of the patella, which united by ligament, and he went lame. Some time afterwards he fractured the other patella, after recovering from which he walked as well as ever he did in his life—greatly rejoiced at the second accident, which put both extremities on an even footing.

Mr. Alcock avers, that in his own practice, and that of others, he has seen many cases, where "perfect ossific union of the patella took place." In a note, however, while alluding to the scepticism of some surgeons on this point, Mr. A. remarks that—"he is not anxious for the term (ossific union) and candidly states that he is indifferent by what name the union be designated provided it is so perfect, that the injured part be equally strong and useful as before the fracture."

If we examine a recent fracture of the patella we find, of course, that the lower portion remains *in situ*, being attached to *ligament*, while the upper portion is necessarily drawn up by the action of the large *muscles* inserted into it. To counteract this retraction, our author avers, that little more is necessary than bringing the leg in a right line with the thigh, and this last raised towards the front of the pelvis—or otherwise the pelvis bent forwards on the thigh. "In practice, says Mr. A. it will be found that this position nearly accomplishes the indication of keeping the broken ends of the bone together; or at least renders the slightest force sufficient, when properly directed, to retain them steadily in contact."

"The muscles having been relaxed by the position above alluded to, let the surgeon compress the broken portions of the bone gently between his fingers and thumbs, using the fingers to one portion and the thumbs, to the other, increasing the pressure until the upper portion be in perfect contact with, and apposition to the lower. Let him observe the extent of force which is necessary to effect this accurate apposition; and he will find, that a force equivalent to a few ounces in weight will suffice; if the relaxed position of the muscles have been well observed. Let those who may be of opinion that the aid of the mechanical powers is required to effect this simple purpose, examine well this part of the treatment, and if a doubt remain, rather remove the support of the fingers from the upper portion, and again observe how slight a force will suffice to bring it back to its natural position; for, in truth, no pain nor inconvenience will be experienced from any part of the treatment, unless the force used exceed the necessity of the case; and the patient, so far from complaining, will be more apt to express his satisfaction at the comfortable degree of support which either the hand, or the apparatus, subsequently supplying its place, affords him." 295.

The following directions for the management of this fracture we shall give in Mr. Alcock's own words.

"The apparatus may be very simple: the writer has generally used strips of plaister of about an inch in breadth and a foot long, crossing obliquely from the integuments immediately above the patella to the upper and back part of the leg, the patella being within the angle formed by the crossing. This, he has believed, rendered the bandage and compress less liable to slip, but he does not consider the plaster essential. A moderate-sized compress has been then placed immediately above the patella, the ends bending downwards on each side, so that the bandage has rested upon it, and has produced an equable and steady, though moderate compression, in a direction opposite to that of the extensor muscles; thereby counteracting any contraction which, under the previously detailed circumstances, they may be likely to exert. A narrow double-headed flannel bandage has been generally preferred, on account of its greater elasticity than linen or calico. A splint may or may not be placed in the ham. If the steadiness of the patient can be depended upon, the splint may be dispensed with;—if his steadiness be doubtful, the splint had better be used. The bandage may be applied in any convenient manner, forming a sort of fulcrum by the use of pins whenever it become necessary to change the direction of the bandage, so as to make it bear particularly upon any required point. It is not likely that any one expert in the use of the roller, and having a clear idea of the object to be attained by its application, will fail in giving the necessary support where it is required. The bandage should not be so tight as to cause the leg to swell, otherwise the lower part must be also supported. There is an advantage in leaving the patella uncovered, as it enables the surgeon not merely to suppose that the ends of the bone are steadily supported in contact, but to assure himself of the fact, day by day, without disturbing the apparatus; unless any slipping of the bandage, or slight retraction of the upper portion of the bone, should render it necessary." 297.

After the first few days it may be ascertained that slight flexion of the knee may be allowed, to relieve irksome feelings, without deranging the apposition of the bones. After this the patient may be allowed to move about upon crutches, supporting the injured limb in a broad sling passed over the shoulders. At the end of a month the foot may be put cautiously to the ground, but the knee is not to be bent.

From fracture of the patella the transition is natural to that of the olecranon. This last, however, is always the result of external injury. The mode of union is generally by ligament, elongated in proportion to the retraction of the broken portion of bone. "In this instance the power of extending the forearm is grealty diminished; whilst the natural support afforded by the extremity of the bone to prevent the too great extension of the forearm being lost, the forearm may, by external force, be carried backwards beyond the direct line of the humerus."

"Another mode of union takes place when the broken portion has not been kept sufficiently near to the part from which it has been separated; yet not so distant as to prevent ossific union. Consequently the extremity of the bone projects farther than natural, the forearm cannot be fully extended, and considerable inconvenience and lameness result. When this mode of union occurs, there is frequently great irregularity and enlargement of the bone at the place where it has united." 300.

The third and (according to our author) most desirable termination is when, by great care, a perfect osseous union is effected. This Mr. A. thinks may generally, if not always, be obtained.

"It is obvious that the simple principles of practice in fracture of the olecranon are, to diminish the swelling which the violence necessary to produce fracture generally occasions;—to guard against inflammation;—to replace the fractured portion, and keep it steadily in its natural position; to relax the muscle (the triceps) inserted into it;—to prevent rigidity of the joint by appropriate exercise, as soon as the union becomes sufficiently firm to admit of it with safety; &c.—but an ordinary example may supply the place of farther detail.

"Sept. 20, 1820. A young man, aged twenty, was thrown out of a gig, and fell upon his right elbow. His face and right hip were also injured. The swelling of the elbow was so great, as to prevent the examination by the touch being satisfactory; although the inference was clear, from the manner in which the accident had occurred, and the extent of injury around the elbow, that the olecranon must have suffered fracture. Treatment—bleeding, both general and topical; purging; low diet, and cold applications to the injured parts; to rest the arm.

"Sept. 24. The swelling of the elbow was so much reduced as to admit the existence of fracture to be distinctly ascertained. The olecranon was broken off and drawn upwards. The fracture was reduced; and the detached part kept down by compress, adhesive strips, and bandage: the arm put in the extended position, and a hollowed splint placed in front of the elbow joint, to prevent accidental flexure.

"Oct. 4th. No pain. 'There is no crepitus now perceptible. The broken portion is perfectly in place, and resists the slight force which can be prudently used in examination.'

"6th. Arm firmer;—bandage adjusted.—It is needless to state the daily progress. The olecranon united so perfectly in its natural place, that it required careful examination to distinguish it from that which had not been injured. For some time after leaving off the splint the motion of the joint was checked, no doubt from having been kept stationary in the extended position; but by daily using, at first, passive flexion; and afterwards, swinging the forearm with a small weight in the hand, the use of the joint was perfectly restored. Friction was combined with this exercise. He was perfectly well by the end of October." 304.

Art. III. *Some Observations on the Utility of Opium in Certain Inflammatory Disorders.* By John Armstrong, M. D. Lecturer on the Principles and Practice of Physic.

A great deal of theoretical prejudice has obtained, and still obtains, respecting the physiological effects of opium on the human frame. Its action has been too generally and too strictly looked upon as stimulant, without taking into just consideration its other properties. Practitioners in the hotter regions of the earth, and especially in India, have long been in the habit of giving opium freely in acute diseases, and even in topical inflammation, after or in company with, venesection; and generally in combination with calomel. The utility of this practice has been long established, in those climates, and it is now making its way in this country, with some little variety in the modus.

Some years ago the illustrious author of the paper before us had his attention drawn to the subject in question, by observing a chasm or defect in the common modes of treating acute abdominal inflammation by the simple depletion of bleeding and purging. He had bserved long before that period, that when opium was given *in full doses* immediately after copious depletion, the cases terminated successfully.

"Under this impression, I determined to administer opium in future more boldly, in those cases which appeared most promising for its favourable effects. Within the last four years, I have prescribed large doses of opium, conjointly with blood-letting, in at least a hundred cases of acute and sub-acute abdominal inflammation, proceeding from common causes; and as its efficacy has considerably exceeded that of any other remedy tried under similar circumstances, I shall endeavour to point out in this paper, first, those circumstances, and secondly, the most efficacious doses." 310.

The following symptomatic, or pathognomonic sketch we shall give in our author's own words.

"Acute inflammation of the peritoneal coat of the bowels is generally marked by a distinct pain in some part of their course, increased under pressure, and attended by a quick, small, hard pulse, a hurried respiration, a hot skin, a whitish moist tongue, flatulence, constipation; and nausea, retching or vomiting occur, if not always at its commencement, at least during its progress. When this form of inflammation is seated in the peritoneal coat of the stomach, the symptoms are similar, except that the pain is limited, not to some part of the intestines, but to the epigastric region, while the pulse is smaller, and the vomiting usually urgent from the beginning. In accute peritonitis the pain is diffused over the abdomen, the pulse is fuller, the heat higher, and the stomach is seldom disturbed by nausea, retching, or vomiting, till towards the close of the disease. The uterus is rarely inflamed acutely, except after delivery, and the inflammation is denoted, then, by a hard circumscribed tumour in the hypogastric region, painful on pressure, and attended by much fever; but in such instances it frequently happpens, that the peritoneum itself is inflamed, or the peritoneal coat of the intestines, and then the symptoms have a mixed character. In acute nephritis there is, on one or both sides of the loins, a distinct pain, increased by pressure applied forcibly there, and on the directly opposite side of the belly. More or less pain or retraction of one of the testes, scanty urine, and fever, are the concomitants. Many symptoms have been enumerated as pathognomonic of acute hepatitis, but the only one upon which I would rely is pain on pressure in the region of the liver, accompanied by fever; though the colour of the stools, urine, or skin, occasional chills, depression of spirits, and other signs, will unquestionably assist in the diagnosis." 311.

In acute inflammation of the peritoneal coat of the stomach or bowels, Dr. A. makes it a rule to see the patient bled, in the first stage, to complete relaxation—approaching syncope, whatever may be the quantity necessary to produce this effect. As soon as ever the patient recovers from the faintness, three grains, at least, of good opium, in the form of a *soft* pill, are given, and quietude is strictly enjoined, so that, if possible, sleep may be obtained. In some irritable habits less of the solid, and some fluid opium are prescribed, in order that the anodyne and sedative effects may be more quickly produced.

"The effects of opium thus administered, are to prevent a subsequent increase in the force or frequency of the heart's action, and a return of the abdominal pain, while it induces a tendency to quiet sleep, and a copious perspiration over the whole surface. In many instances, this simple procedure will remove the inflammation, at once, nothing being afterwards necessary, when the patient awakes, but spare diet, absolute rest and quietness, with an occasional mild laxative. But on all occasions, if possible, I visit the patient about three or four hours after the administration of the opium, and if there be pain on pressure in any part of the abdomen, with a hot skin, and quick jerky pulse, I order the patient, in my presence, to be promptly bled again in the same decisive manner as before." 312.

Our author properly observes that some physicians commit a great mistake by dictating on paper the quantity of blood to be drawn. We hope, for the honour of medical science, that this is now very rarely done—at least we have not seen any physician so absurd for some years past. Dr. A. is perfectly right in averring that "it is solely upon the *effect* produced that the benefit of blood-letting depends"—but we cannot entirely acquiesce in the remaining portion of the sentence—"and therefore the effect should always be witnessed by the physician." If the general practitioner who bleeds the patient were a mere phlebotomist, or a chemist's apprentice, we would say Dr. Armstrong was fully justified in the above precaution; but knowing, as we do, the education and the practical information diffused, in our days, among the general practitioners, we have no hesitation in avowing, that there is rarely much danger in trusting to the judgment of surgeon-apothecaries upon such occasions, since they are equally aware with the physician of the great importance attached to effectual depletion in the early stages of abdominal, and indeed of all accute inflammations.

After this second abstraction of blood carried again to complete relaxation, our excellent author generally prescribes about two grains of opium with three or four grains of calomel, exhibited in the form of a pill, as the faintness disappears. The patient is again left in perfect quietness, and refreshing sleep with free perspiration most frequently succeeds. A third venesection is rarely requisite; but, if, after the expiration of five or six hours from the second, pain and fever still exist, the operation should again be performed as before; and one grain of opium with two or three grains of calomel given almost immediately afterwards—while half a grain of opium and two of calomel may be repeated every four hours till sleep and general perspiration be induced.

> "It is repeatedly observed in my works, and the observation was made long before their appearance, that the specific effects of mercury are easily procured when large quantities of blood are abstracted under its administration. For this reason, the calomel should be given with proportionate care, whenever copious and repeated blood-letting becomes necessary." 313.

The above plan, with the exception of giving a large dose of opium alone, after the first bleeding, is nearly that which we have ourselves pursued for twenty years past, and which has been pursued by most tropical practitioners. Dr. Armstrong's modification of it we think a decided improvement, from some trials which we have lately made, and therefore we recommend it to the consideration of our professional brethren.

Dr. A. observes, that when the cure has been left entirely to his own management, he has never found it necessary to bleed more than thrice, in the most severe examples of acute inflammation; though now and then the additional aid of leeches to the abdomen has been deemed expedient. We may just remark, *en pas-*

sant, that we do not quite agree with our able author on the point of local blood-letting. We attach more importance to this measure than Dr. A. seems to do. We have often found, that when the vascular action was brought down by the venesection carried to syncope, the slow but steady drain from twenty or thirty leech bites *kept down* the excitement, and thus prevented the necessity for farther venesection.

On the subject of purgatives, every practitioner of observation must agree with Dr. Armstrong. The best way to open the bowels is by bleeding. Constipation is not the cause but the effect of the inflammation, and to remove the cause is the first object. A discharge from the bowels very frequently follows the bleeding; and if not, the bowels are easily opened when the inflammatory tension is taken off the peritoneal covering. Large glysters of warm water, however, are always proper for the purpose of removing accumulated fæces from the colon, and inviting discharges from the upper intestines.

> "Large and repeated doses of opium tend to lock up the secretion of the liver, and therefore, in acute hepatitis, they should rarely be repeated beyond the second time, being always premised by venesection, and always conjoined with calomel. Moreover, saline purgatives should be freely employed from the beginning, and if any traces of inflammation should be left, in despite of active evacuations, the mouth ought to be affected by mercurials. A similar plan may be pursued in common peritonitis and nephritis. In the first and subsequent editions of the Illustrations of Typhus and other febrile Diseases, a striking case of the latter is detailed, in which full doses of opium, united with calomel, succeeded even when copious venesection had failed; and I may here add, that I have since witnessed some cases of inflammation of the bowels, where full doses of opium finally effected the cure, after bleeding and purging had completely disappointed my expectations. So great indeed is my confidence in full doses of opium in peritoneal enteritis, that if compelled to say, supposing myself the subject of the disorder, whether I would exclusively rely upon them solely, or upon blood-letting solely, I should certainly fix upon the former; at the same time I should like to have the simultaneous influence of both remedies, being convinced, that they are far more serviceable combinedly, than separately employed." 315.

We confess that did we labour under enteritis, and had only the choice of opium or the lancet, we should not hesitate to prefer the *latter*—but every man to his taste.

Dr. A. sometimes gives larger doses of the opium than above stated, but never beyond five grains. He remarks that, in some instances, where all signs of abdominal inflammation have subsided, the pulse continues considerably quicker than natural, and a simple fever ensues. So long as this fever lasts the patient must be kept in bed, the diet must be spare, the bowels kept open, an opiate administered at bed-time. Our author has discarded from his practice "the employment of such medicines as digitalis, prussic acid, and tartarized antimony, in the beginning of acute inflammations." The advantage of tartarized antimony as an auxilliary to the lancet and opium will, we believe, be acknowledged by most practitioners who have attentively watched the operation of the remedy. At the same time it is proper to remark that antimony is far less applicable to inflammations of the abdominal than of the thoracic viscera, on account of the gastric irritability so commonly attendant on the *former* class of complaints.

> "As soon as I had satisfactorily ascertained the combined efficacy of blood-letting and opium in acute abdominal inflammations, I mentioned the results of my experience privately and publicly in the metropolis. Several practitioners have tried this treatment, and, so far as I have yet heard, found it similarly beneficial. It has now been employed extensively by myself and others in those acute forms of abdominal inflammation which so often follow delivery, and in which it has been more uniformly efficacious than any other. The great peculiarity of acute abdominal inflammation in the puerperal state is, that it runs a more rapid course than ordinary, and therefore requires to be more promptly subdued. Though in the country my success was considerable in what is vaguely called puerperal fever, yet under the same treatment in London, namely, bleeding and purging, I am fully persuaded that a great many patients would have been lost. Women are much more irritable in London than in the country, probably on account of their more sedentary and artificial habits; and by consequence they are much more liable to that reaction of the heart and general irritation, which are so apt to follow copious bleeding in them, and which appear to renew the inflammation when allowed to advance, but which may almost invariably be controlled, by full doses of opium given at the precise juncture before mentioned." 318.

We fear, from recent facts, that puerperal fever has resisted this and every other mode of treatment with as much obstinacy as at any other former period of its history.

Dr. A. observes, that as opium has a specific effect on the vessels of the head, great care is necessary in its exhibition, when the brain is affected. A moist tongue, Dr. A. conceives, is essential to the good effects of opium—"and therefore, in specific fevers, such as typhus, were the tongue is dried and glazed, it always does harm instead of good, even where abdominal inflammation is present." The only cases where our author has known opium beneficial while the tongue was dry, were those which had been preceded by copious hæmorrhage; and certainly in many of these it has (he avers) apparently saved the patient by allaying the existing irritation, and preventing the occurrence of that violent reaction of the heart, by which the hæmorrhage is so liable to be renewed.

"In several cases of acute inflammation of the pericardium, of the pleura, and of the substance of the lungs, I have tried the large doses of opium after copious venesection, with similar benefit as in the acute abdominal inflammation before mentioned; but it is a practice which I would not be understood to recommend in inflammation of the mucous membrane of the bronchia, an affection which requires, in many instances, the greatest circumspection as to blood-letting, and in which those measures which act simultaneously on the bowels and on the skin are singularly useful. Where the heat on the surface is universally high in bronchitis, and the pulse at the same time expanded and resisting, I have found moderate venesection very serviceable; but when the heat is subdued, and the pulse small and compressible, I have generally avoided it altogether, and trusted to the aforementioned means, with an antiphlogistic diet, and a regulated temperature. One of the leading advantages of what might be called anatomical physiology is the ascertainment of the different structures and functions of adjacent parts; and another of the leading advantages of what might be called anatomical pathology is the different results which are displayed, by an accurate examination of those parts after death. But minute observation of the rise, progress, and decline of the symptoms, together with an exact register of the effects of remedies at these different periods, are still necessary to enable us to turn our anatomical physiology, and our anatomical pathology to great practical account. It appears to me, that the French, generally speaking, excel the English in anatomical physiology, and in anatomical pathology; but it also appears to me equally certain, that they have not observed either the symptoms, or the effects of remedies so accurately as we have done, and the English therefore really excel them in the precise application of remedies. But this remark is only referrible to those physicians in this country, who, observing and thinking for themselves, merely deem symptoms the indications of disease, and strive to connect them, as closely as possible, with the condition of different parts of the body upon which they depend; for it must be admitted, that those practitioners who still pursue the nosological method of affixing to certain symptoms an abstract name without a knowledge of the condition with which they are connected,—it must, I repeat, be admitted, that the practice of such men is mere empiricism, similar to that which the public passively adopt and dangerously apply from tradition." 320.

The observations of Dr. Armstrong on the French pathology and practice in the above passage, we are happy to find in unison with what we have all along insisted on in this journal.

Our author has found full doses of opium after copious blood-letting, cut short inflammation of the mucous membrane of the intestines.

"Sub-acute inflammation of the mucous membrane, especially of that portion which invests the small intestines, is exceedingly common as an original affection in this country, both among children and adults. It is generally denoted by an obscure pain in some part of the abdomen increased under pressure, and accompanied by a quick soft pulse, a hottish skin, a slightly furred tongue remarkably red at the top, and a short way thence round the edges; while the stools, from an increased mixture of mucus, most frequently have an oleaginous sort of consistence, and are somewhat darker and more offensive than natural. In the London Fever Hospital I have had a great many opportunities of pointing out this particular form of inflammation to my pupils, and also of showing the great efficacy of small or moderate doses of calomel conjoined with a few grains of rhubarb, and assisted by a little cold-drawn castor oil. The French pathologists have overlooked the general connexion which a disordered state of the liver has with sub-acute inflammation of the mucous membrane of the intestines. Wherever this connexion exists, small or moderate doses of calomel, united with mild laxatives, will be found highly useful, seemingly by gently dislodging the morbid accumulations in the bowels, and particularly by increasing a flow of bile, from which, probably, the blood finds a readier access through the liver, and thus influences the circulation of the splenic, the superior and inferior mesenteric veins, and their ramifications. In all cases, however, of this complicated nature, I have applied leeches to the abdomen, and repeated them as long as there was any pain on pressure; and experience has taught me that they may be employed preferably to general blood-letting in most sub-acute inflammations of the mucous membrane of the bowels. In such examples, the blandest and sparest diet is necessary, for any deviation in that respect is apt to maintain the inflammation, in defiance of the best remedies." 321.

The paper, our readers must perceive, will not detract from the high reputation of Dr. Armstrong, as an accurate observer, enlightened practitioner, and ingenious reasoner.

ART. IV. *Case of blighted Ovum.* By J. HAYES, Member of the Royal College of Surgeons, and of the Society of Apothecaries.

In her fourth pregnancy Mrs. H——— engaged the professional services of our author for her next accouchement. This was about the middle of utero-gestation. In a fortnight afterwards he was sent for, and found the lady complaining of pain at the bottom of the belly, extending down the thighs, having some coloured discharge from the vagina, and being much agitated in mind. She had been frightened. Quietude, venesection—an aperient—afterwards an anodyne. Next day the discharge had nearly ceased—the pain much alleviated—and she was altogether better. Quietude in bed prescribed. Third day. Had felt an unusual coldness and sense of weight in the belly, and also a severe shivering fit, which lasted half an hour, but was not succeeded by correspondent reaction. She quite recovered in a few days. Three weeks afterwards she quickened. At the expiration of 18 weeks our author was summoned, and found her in labour. In fourteen hours she was delivered of a fine healthy child. The abdomen was so much diminished after the birth of the child that our author entertained no suspicion of any thing remaining in the uterus besides the secundines, which were expelled half an hour afterwards, when the womb appeared to have contracted to the usual size. Half an hour after this a blighted fœtus, of about four months, dark in hue and fetid in smell, presented itself and came away, together with a putrid placenta.

"On reviewing the circumstances of this case, I must observe, that whatever may be inferred from some extraordinary accounts on record, no aid to the doctrine of superfœtation is derivable from this instance; and I think there can be no doubt that the exertion and fright beforementioned, occasioning the pain and other symptoms, produced also the partial separation of the less vascular perhaps, or more slightly attached placenta, and, through that medium, the death of the smaller and less vigorour fœtus; an event marked by the rigor, coldness within the belly, and sense of weight above spoken of." 327.

The practical inference, our author observes, to be drawn from this case, appears to be that where, at any period of pregnancy, there have been symptoms of abortion, although they have perfectly subsided, the accoucheur should, during parturition, bear in mind the possibility of there being a dead as well as a living child, and consequently institute a more rigorous examination than, at the time alluded to, he had believed to be necessary.

Art. V. *Two Cases of Obstruction of the Colon; in one of which, Organic Affection of the Aorta and Heart was suspected—and, in the other, proved to exist.* By W. C. Callow, Esq. Surgeon, late of the 20th Dragoons.

In September 1821, our author was summoned, at midnight, to a young lady, 19 years of age, who suddenly became insensible, and was thought to be expiring. For three or four days previously she had complained of headach and sickness at stomach, to relieve which she had taken an emetic and some aperient. Mr. C. found her in complete coma, with pale face, dilated pupils, laborious and slow respiration, quick feeble pulse, and cold extremities. There being distention of the abdomen, a brisk cathartic was administered—a blister to the scalp—heat in the stomach and extremeties. These measures, producing some relief, it was deemed proper to bleed next day from the arm, but the loss of a few ounces produced fluttering of the pulse. Eight ounces, however, were abstracted, when the patient indistinctly exclaimed that she was better. By perseverance in similar measures the symptoms were dissipated; but it was three weeks before the young lady could raise her hand to her head, and several more before she regained the muscular power of her lower extremities. She was now seized with what Mr. Callow considered to be "acute hepatitis"—"the liver, upon examination, presenting itself below the margin of the ribs, indurated, and apparently so enlarged, that it could be traced from the right of the hypochondrium to the left of the epigastrium." Calomel and opium, followed by castor oil, brought away "copious evacuations of black, broken-down scybalæ, mixed with portions of fæces of recent formation." The measures which Mr. C. pursued on this occasion are stated to have been successful, the symptoms progressively giving way, and the patient daily indicating the return of health. In a short time, only a very small portion of the hepatic enlargement was visible. Attacks of syncope now came on, with great acceleration of pulse, and constant headach. Next came a train of pulmonic symptoms ending in purulent expectoration, still attended with attacks of syncope and palpitation. Death closed the scene, but permission could not be obtained for opening the body. From many cases which we have seen, and from the case which is now about to be narrated, we think there is not the least doubt that the supposed enlargement of the liver was no other than accumulation in the transverse arch of the colon. Enlargements of the liver, so palpable as that described above, are not to be reduced so suddenly (if at all) as appeared to be the case in Mr. Callow's patient.

Case 2. This was the sister of the abovementioned patient, who was suffering from an incessant, hard, dry cough, with constant headachs, sickness at stomach, and obstinately constipated bowels. *Strict diet*, *cathartics*, *pediluvium prescribed*. The alvine evacuations were found to be very depraved. The abdomen, on examination, felt tumid and unequally distended.

"In a few days the discharge from the bowels became much more copious, but each evacuation was attended with very great pain in the lower part of the abdomen, and a troublesome tenesmus. The dejections, consisted mostly of hard, black scybalæ, mixed with fæces evidently of recent formation." 331.

Yet the cough and headach remained with little abatement. Venesection to 18 ounces—calomel and antimony exhibited—castor oil daily.

> "Under this treatment some trifling amendment in the violence of the cough was observed, but the bowels were moved with difficulty, never without pain, and generally with tenesmus. A feeling of distention was complained of, as if the contents of the bowels were not carried off, and the abdomen was more tumefied generally. The feet were invariably cold, the head in constant pain, and the right side of the face frequently swollen." 332.

Calomel and opium, succeeded by oil of turpentine and castor oil, brought off a copious discharge of black fetid fæces, and small hard scybalæ, each evacuation being attended with great pain. We cannot follow our author through all his details of symptoms and treatment. We shall give an extract from his report in the month of March, which ought to be read with attention.

> "After a perseverance in this kind of treatment for some weeks, the patient one morning complained of an acute pain under the margin of the ribs of the right side, extending anteriorly to the ensiform cartilage, and posteriorly to the spine. Upon examination, a considerable enlargement presented, occupying the hypocondrium, and extending towards the middle of the epigastrium. This induration had exactly the feel of the tumid margin of a diseased liver, and was precisely situated where that viscus is to be felt, when morbidly enlarged. The alvine discharges had, from the first, demonstrated great derangement in the hepatic organs, and excessive irregularity in the secretion of bile. The almost daily exhibition of aperients, with the frequent and regular use of cathartics, for the last four months, had, I presumed, rendered it impossible there could be any accumulation in the colon. I concluded, therefore, after some reflection, that the disease now existing, was a highly morbid state of the liver, and that the whole train of symptoms my patient had suffered from, were merely effects." 333.

Under the full impression of the disease being of a hepatic nature, our author commenced that treatment which he considered best adapted for the complaint. This treatment is not specified. It did not, however succeed. About two months subsequently, the pain in the chest became very acute in the region of the heart—and, upon examination, three of the ribs appeared considerably elevated. "The beat of the heart could be distinctly heard and counted. A pulsation could be seen and felt in epigastrio." Spinal disease was discovered soon after this, and relieved by caustic issues. In September the report is, that debility is making rapid strides—that there is decided pressure on the brain, and evident organic disease of the heart. The alvine excretions were now more easily procured, and they were of a more healthy character. "No scybalæ nor hardened fæces had passed for months; still the abdomen was tumid, with a feel of great inflation, and the patient was troubled with constant eructations, and a formation of gastric acid." Death closed the scene in October.

Dissection. "Upon dividing the parieties of the abdomen, a portion of the colon forcibly protruded, and upon my continuing the incision to the pubis, not any thing but colon, thinly covered with pale, bloodless omentum, was to be seen. Upon removing the omentum, and proceeding in my examination, I found the colon enormously distended, had occupied nearly the entire cavity of the abdomen, displacing, or compressing the other viscera, in an almost incredible manner. The small intestines were pressed down into the cavity of the pelvis, where like a coil of small rope, they lay in contact with the uterus, void of contents, and perfectly white. The stomach was diminished to the size of a large pear, its muscular coat greatly thickened and unusually hard, with the villous coat highly vascular and of a light red colour. *The liver had been closely impacted against the diaphragm, with which it had formed two adhesions, was diminished to about half its usual size, but no morbid appearance could be detected in its substance, nor evidence of any having ever existed, with the exception of the adhesions of the serous membrane to the concave side of the diaphragm.* The gall-bladder was large, and distended with bile. The spleen was extremely diminutive, but unusually firm in texture. The pancreas was thin as a riband, and with difficulty distinguished from peritoneum. The kidneys did not present any morbid appearances.

"Tracing the colon from the small intestines, its enlargement was apparent immediately above the cæcum, increased considerably as it ascended, was excessive in its transverse arch, and in its descent, till it reached below the crest of the left ilium, where a kind of cul de sac had been formed, immediately below which it was so much diminished as to be with great difficulty distinguished by the eye from the folds of the peritoneum; but between the finger and thumb the sigmoid flexure could be traced crossing an unusually acute angle formed between the last lumbar vetebra and the sacrum. Here the bowel presented to the touch the resemblance to a small, hard, inelastic cord, till its entrance into the rectum, which in itself was of less than the usual magnitude, but not considerably so.

"Having divided the colon, in its whole length, from its mesenteric attachments, and passed a ligature at the cæcum, it became evident that this amazing intestine was occupied only by flatus. Upon completing the dissection of the rectum from the vagina and sacrum, I removed the colon from the abdomen for the purpose of a minute inspection of the whole canal.

"The anus was surrounded by a small, deep, corroding ulcer, but it occupied only the integuments of the margin, and did not enter the rectum. The mucous membrane of the rectum was much thickened in places, puckered up in folds, corroded in patches, and covered with a thick tenacious coat of muco-purulent fluid.

"The colon suddenly dimished immediately above the rectum, and at and about the sigmoid flexure, more especially where it had lain in contact with the superior margin of the sacrum, the calibre of the bowels would not more than admit the point of my little finger. For about twelve inches in length the villous coat of the intestine bore the appearance of long-continued increased action, being corroded in several long, narrow furrows, and the canal filled with a tenacious purulent secretion. The muscular coat was much thickened, and in such a state of scirrhous consistence, that in slitting it open the scalpel met with a resistance similar to dividing cartilage. Within the ala of the ilium, and immediately above the stricture, the bowel had obtained the almost incredible size of fourteen inches circumference, perfectly void of fæces, as white in appearance as writing paper, and the coats so extenuated as to be almost as thin. From this part to the left hypochondrium there was some diminution of the calibre of the bowel, which had formed a number of irregular pouches; but the whole of the transverse arch, and most of the ascending portion was enormously enlarged, of a pallid whiteness, and delicate texture. Scarcely any fæces were contained in the bowel, except in the ascending portion, and those were fluid, and not of unhealthy appearance. Not any thing remarkable was to be observed in the remaining part of the intestinal canal, except that the small intestines were unusually white, and of diminutive appearance. The bladder and uterus were of perfect formation and healthy structure." 338.

On opening the thorax the pericardium was found containing nearly a pint of deep yellow serum. The heart was greatly enlarged, fatty, and flacid, "presenting the appearance of par-boiled meat." The left ventricle was very much enlarged, its parietes thin and weak. The opening into the aorta, was of great magnitude, the semilunar valves being quite incapable of closing the orifice. The aorta itself was twice its natural calibre, and this enlargement increased as the aorta was traced downwards. At the crura of the diaphragm the vessel measured six inches in circumference.

"Reverting again to the abdomen, I proceeded to lay bare the artery upon the spine, when I discovered a hollow, or rather flattened part of the vertebræ, occupying about four inches of the column. The artery here, immediately after its exit from the diaphragm, had obtained a sudden contraction formed like the shoulder of a French wine-bottle. The vessel beneath the contraction had shrunk to a very diminutive size, and was perfectly empty, as were all the vessels given off from it. The two external iliacs were quite vacant, and not larger than crow-quills." 339.

On examining the spine it was found that a considerable loss had been sustained in the bodies of three of the vetebræ (lower dorsal and upper lumbar) apparently by absorption, there being no caries. There was no disease in the lungs.

Both these ladies had enjoyed uninterrupted good health till within twelve months of the time our author had them placed under his care. Each of them traced the derangement of her health to constipation of the bowels. The family consisted of four benevolent and affectionate sisters, who had, for many months, indiscreetly confined themselves to the house in the sedentary occupation of needle-work for the poor. Two of them appear to have fallen sacrifices to their unreasonable philanthropy. A third has recently escaped a similar catastrophe from sudden and total obstruction of the colon, requiring the most decisive measures for its removal. The fourth has an enlargement of the thorax on the left side—a distressing feeling in the chest—irregularity of pulse—and incipient stricture of the œsophagus.

There can be no doubt, we think, that a strong predisposition to organic disease must have existed in the constitutions of these four sisters, otherwise the sedentary occupations abovementioned, and to which thousands are exposed for years with little bad effect, could never have produced such dreadful consequences. This last case shows how medical men may be deceived by mistaking accumulations in the colon for organic diseases of the liver. The case also strongly points out the necessity of examining the state of the abdominal viscera in obscure and anomalous diseases. We have had unequivocal proofs in our own practice that scybalæ will lurk in the cells of the colon for many months, although fæces are daily discharged with regularity from the rectum. The irritation which these excrementitious bodies produce on the organic structure with which they lie in contact, gives rise to a host of anomalous affections seated apparently at a great distance from their real causes.

The thanks of his brethren are due to Mr. Callow for this communication.

ART. VI. *An unusual Case of Twin Conception and Labour; also, a case of blighted Ovum, which was retained in the Uterus eleven months; with Practical Observations, &c.* By JOHN POWELL, ESQ. Surgeon and Accoucheur to the Lying-in Institution, Newman Street, London.

Case. A lady fell in labour of her ninth child, on the 26th February 1820, and continued with labour pains for the space of 48 hours. Our author then ruptured the membranes, a large quantity of liquor amnii escaping. In two hours the child was delivered. A violent hæmorrhage supervened, but was restrained as soon as the placenta was brought away and regular pressure made. The womb appeared to be contracted to the usual size. On introducing the finger into the vagina to feel if any shreds of membrane remained, our author was surprised to find "a hard irregular substance enveloped in membrane, resembling the bones of a fowl," and, which, when brought away, proved to be a perfectly formed fœtus, apparently of about four months, squeezed flat, and without any marks of putridity. Its placenta was found detached within the uterus, but showed no umbilical vessels ramifying on its surface, being (instead of a loose, spongy mass) converted into a firm, fleshy, somewhat tuberculated substance. Our author believes this to be the only case upon record, "where a blighted fœtus has not been expelled in a putrid state, and in which the rationale of the occurrence is satisfactorily accounted for, without having recourse to the doctrine of superfœtation." Superfœtation, in the human subject, he believes, to be almost impossible, except where there is a double uterus. Although cases similar to the above are related by different authors, the appearances of the placenta are not mentioned by any writer, as far as Mr. P. is acquainted, which he thinks, is surprising, considering its morbid state in the present instance. This morbid state is dwelt upon in cases of blighted ovum of single conceptions, a case of which Mr. Powell digressively relates, as connected with the theory which he means to illustrate. The particulars of the case were as follows :—

A young, healthy woman was married in March 1817, having previously menstruated regularly. She became pregnant, about the month of May, and was threatened with abortion at the term of three months, but by care she went on till within eight or ten days of delivery, when a slight flooding accompanied by pain took place, and continued more or less till her accouchement, which occurred on the 31st of March 1818. The labour pains were violent, and it required depletion to prevent puerperal convulsion.

"At length a fleshy mass was expelled from the uterus, about the size of a four months placenta, but as much more dense in structure as in the former case, and bestudded on its internal surface with an appearance of hydatids. The woman did well ; but after the expiration of a month, she discharged nearly a pint basin full of small hydatids, which continued coming away for many days ; since which she has menstruated regularly, except when pregnant, and has had several children, without any of her former anomalous circumstances. *The growth of the fœtus being here destroyed at an early period, it was probably very small, and escaped unobserved with the coagula, that occasionally were discharged in the week prior to the commencement of labour, as I did not see the whole that came away, not visiting her every day*; however, that the substance which ultimately came from her was a placenta, was quite evident, and cases of this nature not being very uncommon, though generally terminating sooner, the facts will be readily admitted." 347.

Considering that this case is brought forward for the support of a theory, we confess that the proof of the "fleshy mass" being a placenta, appears to us to be exceedingly weak—and as for the proof of the accompanying fœtus, it is altogether wanting. Is it likely that the fœtus itself should have escaped unobserved with the coagula, while the placenta produced such violent parturient efforts for its expulsion?—The question of superfœtation we shall not here enter upon. From the well authenticated *facts* brought forward by Foderé in particular, and the recent case published by Dr. Maton, we are inclined to believe in the possibility of such an event, notwithstanding the ingenious *arguments* opposed to it by various authors.

In conclusion, Mr. Powell offers some practical suggestions to the junior part of the profession, respecting the danger of leaving a patient with a second fœtus in utero—a circumstance which occurred, he observes, in the practice of a gentleman of "first rate talents" a few years ago in this metropolis.

Mr. P. makes it a rule to introduce two or three fingers into the vagina, for the purpose of removing any portion of membrane, &c. which may accidentally have been torn off in withdrawing the placenta, he having known the retention of such substances keep up irritation and pain, with an increased fœtor and discharge of the lochia, for many days.

ART. VII *A Case of Cut Throat, successfully treated.* By C. T. HADEN.

We dislike the introduction of vulgar and coarse terms in medical or surgical science. They are introduced by some people, under the idea of simplifying the language, and banishing what they call "jargon" from medical writings. Thus we shall have "broken head" instead of fractured cranium—"bloody nose" instead of epistaxis—"black eye" instead of ecchymosis palpebrarum—and "cut throat" instead of wounded larynx or trachea. Certainly pedantry is preferable to this—the real jargon which they complain of.

This case was published because Mr. H. thought it involved some peculiar principles of surgical practice important in such events. For these peculiar principles he candidly acknowledges himself indebted to Mr. Alcock.

Case. A woman, after suffering pain in her head for some days, but apparently without any thing like reason for the deed, attempted suicide in July 1822, by "dividing the thyroid cartilage and adjacent parts, so as to lay open the larynx and expose to view the posterior surface of the pharynx." The wound of the cartilage was jagged, and a portion of it nearly detached. There was considerable hæmorrhage, but no vessel required ligature except one near the surface. There was violent cough, and occasional attacks of suffocation, which were relieved by clearing the wound, from time to time, of the ropy mucus which accumulated there."

"The blood which continued to flow, or rather to ooze rapidly from the divided surfaces, for a considerable time, was prevented from being carried into the windpipe during inspirations (which were, as might be expected, much more violent than natural), by inclining the body forwards, and by the constant and cautious application of soft sponges, frequently renewed, immediately after being squeezed from hot water. 352.

After the cessation of the hæmorrhage, the wound was carefully cleaned, and the fragments of cartilage removed. Two ligatures were then introduced, but not drawn tight—nor were the parts closed, except occasionally, for two hours, on account of the sticky mucus. Drink taken by the mouth came principally away through he wound, producing cough, and threatening suffocation. In two hours the wound looked pale and free from blood. The ligatures therefore were drawn so that the lips of the wound were lightly but accurately closed. Compresses and slips of adhesive plaister were applied secundum artem. There was an aperture left in the middle for the expiration of sputa, to which aperture a sponge was applied in the intervals of the cough. All food and drink were strictly prohibited for 30 hours, when a little milk was sucked through a straw, but passed almost entirely through the wound. *Third day.* Nearly one half of the wound was observed to be united; but the other half was wider than it ought. A little milk seemed to pass into the stomach. On the *fourth* day there was reaction that required bleeding. The edges of the wound were brought together by another ligature, and sticking-plaister with compresses were applied. From this period the case went on well; and in a fortnight the wound had become contracted to a small size, though liquids still passed through it in deglutition. In a month there was only a small fistulous opening. This ultimately closed entirely.

It is properly observed in a note to the above case, that few wounds penetrating the larynx or trachea admit of the attempt to close the opening, until after the irritation consequent on the wound has subsided. The accumulation of tenacious mucus is so great in many instances, as not only to endanger, but actually to produce suffocation, unless precautions be taken to moderate it by allaying irritation, and removing the mucus as fast as it is accumulated.

One of the dangers in cases of this kind is hæmorrhage; and the consequences of bleeding would be enhanced if the wound were tightly bound up. A case is related in a note, which we shall extract as a warning.

> "A gentleman cut his throat in the night. The wound was very large; but as the hæmorrhage had ceased, the two attendant surgeons closely stitched up the wound, and left their patient. At an early hour the next morning the poor man was dead. The writer witnessed the dissection; and he considered that death took place in consequence of the immense sanguineous engorgement of the cellular membrane surrounding the wound. Secondary hæmorrhage had of course taken place; and as the careful closing of the wound had prevented the escape of the blood, the latter had been so forcibly injected into the surrounding parts, that the whole mass on being divided put on the appearance of a clot of blood. The force of the injection had indeed been surprisingly great. In this case the wound had not penetrated either larynx or trachea." 358.

We once saw a remarkable case of wounded trachea and œsophagus at Pulo Penang. A Malay won all the money which his companion possessed, by gambling. The loser said nothing at the time, but watching an opportunity in the night, he drew a knife across his friend's throat, severed the wind-pipe between the thyriod and cricoid cartilages, and wounded largely the œsophogus behind. The carotid arteries escaped, but the hæmorrhage was great, and the wound was of frightful extent. Nothing whatever was done but keeping the wound clear with a sponge. The man was nourished by milk and broth glysters for more than a fortnight, during which time he could swallow nothing without danger of suffocation. The wound granulated and slowly closed. We believe that the cure might have been accelerated by stiches after the first period of irritation was over. We would also suggest that, in such cases, fluid nutriment should be introduced into the stomach through an elastic tube. We shall close this subject with the following quotation from a note which we suspect did not emanate from Mr. Haden himself.

> "This principle of allowing wounds to remain open for some time after infliction, before they are closed, is abundantly applicable to operations in general. An irritable state exists in all wounds, as the immediate consequence of the first violence. This irritability subsides in a short time. Now union by the first intention will more certainly take place if a wound be tranquil when closed, than if it be irritable: not to repeat, than as the arteries of the part show, by their increased pulsation, that they partake of the irritability, one chance of secondary hæmorrhage is removed, if the irritability be allowed to subside before the wound is closed; for even the mere pressure of irritable arteries might greatly increase their already exalted local action, and thus induce them to bleed again." 360.

Art. VIII. *Case of Poisoning by Opium.* By J. Hayes, Member of the Royal College of Surgeons.

Mr. Hayes was called to a lady within half an hour from the time she had swallowed about thirteen drachms of laudanum. He found the patient lying on her back in a state of stupor, with the mouth half open, and eyes shut, countenance ghastly, lips livid. The pupils were found to be greatly dilated, tunica conjunctiva reddened, and her whole aspect like that of a person recently much convulsed, and now dying. Two drachms of sulphate of zinc were dissolved in a small teacup-full of warm water, and a small quantity was, with much difficulty, got down the throat —not perhaps exceeding ℈j. of the sulphate. After some time another quantity was got down, and vomiting was produced, the ejected matters smelling of opium. Deglutition now became more easy, and more of the sulphate was exhibited, which was succeeded by more copious vomiting. There were shortly symptoms of determination of blood to the head, and they were relieved by sanguineous depletion. After the laudanum was considered to be completely evacuated, acids and coffee were administered—and the patient recovered. The treatment was very judicious according to the then known means; but the injecting apparatus will now supersede all others, especially in cases of poisoning by tincture of opium.

Art. IX. *Remarks on the Neuralgia, as a Class of Diseases, with an allusion to a Case of Aphonia in Illustration.* By David Uwins, M. D.

Dr. Uwins, as usual, prefaces the principal matter of the paper with sly cuts at the "digestive organ theory," the "vascular theory," and some other theories of the day; but these we shall pass over without being so cynical as the author himself on his own production. "What will my readers say to me for thus rending mountains, and then displaying nothing but the *ridiculus mus* of a case of aphonia treated successfully by galvanism and nitrate of silver?—*vox* et preterea nihil." 372.

In our apprehension the worthy Doctor has not done so much mischief to the mountains as his too tender conscience accuses him of—and therefore we shall proceed at once to the "vox," so speedily retuned by the galvanic battery of Mr. Le Beaume.

A young lady of delicate frame, strumous habit, and nervous susceptibility, was sent up to our author from the country for medical assistance. She could not articulate in tones higher than "*a very inaudible* whisper." Query, what tone is that which is *inaudible?*—In this state she had been for four months, although she had been put upon an alterative plan of treatment, "under the supposition of digestive organ derangement," and subsequently taken chalybeates. In the present instance, our author judged the complaint to be purely nervous, because the subject of it, though decidedly strumous, had no marks of disordered secretions impeding the vocal powers.

> "In a word, I considered the altogether of the case to be nearly similar to the effect that would have been produced by the actual division of the vocal nerves, and that, therefore, the indication of treatment was principally that of restoring nervous excitation. And what more effectual means present of so doing than imitating Wilson Philip in his operation upon maimed animals? Under this feeling I ordered her to be galvanized; the operation was performed by Mr. Le Beaume: he applied one end of the wire to the epigastrium, and the other to the cervical vetebræ, and, in the first instance, only used a very small number of plates from a large trough. In conjunction with the galvanism, I prescribed pills composed of a sixth part of a grain of nitrate of silver, which I gradually increased to half a grain. In two days from the commencement of the plan, the voice was decidedly improved; it was not, however, completely restored till after the lapse of about a week; and this gradual restoration I, of course, hailed as a more satisfactory result than had the recovery been immediate." 374.

We think that those practitioners who are in the habit of exhibiting the nitrate of silver, will not attribute much of the cure to doses of a sixth of a grain up to half a grain for a week. The fact is, that there is something very unaccountable in these cases of aphonia. They come on without apparent cause—they continue, in many instances, to resist every remedy—and lastly, go off, where no medicine is taking, as suddenly as they came on. Having often seen these instances, we attach little importance to the disappearance of the complaint, in a single case.

while under a galvanic treatment. At the same time, as the accumulation of facts must begin with some single one, we lay Dr. Uwin's case before our readers with the view that—"*valeat quantum valere debet.*"

The last paper in the volume is one by Mr. Alcock, on congenital division of the palate, which we cannot analyze without reference to a well-executed plate, and therefore refer our readers to the original.

We have now closed the first volume of the Surgeon-Apothecaries' Transactions. We hope the first will not be the last. We advise the council of publication to take care not again to admit so much heterogeneous matter as this volume contains. No work could prosper, or at all exist under such circumstances. The papers, in a publication of this kind, should not be so long and prosing as many of these are. Well-attested facts and concise observations on them, are the materials which are wanted, and the only ones that will afford healthy nutriment for the periodical volumes of a society or association.

IX.

An Essay on the Blood, comprehending the chief Circumstances which influence its Coagulation; the Nature of the Buffy Coat; with a concise medical View of the State of the Blood in Disease; and an Account of the Powers of a saturated Solution of Alum, as a Styptic Remedy in Hæmorrhage. By CHARLES SCUDAMORE, M.D. F.R.S. Member of the Royal College of Physicians, &c. &c. Octavo, pp. 162. London, 1824.

DR. SCUDAMORE, is entitled to much praise for the zeal which he has manifested in these experiments, amounting to nearly one hundred, on the blood—experiments which, as he observes, must have been attended "with peculiar difficulty and trouble." "It may," says Dr. S. "be called a path of labour more useful than agreeable, except as the search after truth always carries with it some reward."

There can be no doubt that an acquaintance with the appearances and actual condition of the blood in disease, must be an important guide in medical practice. How far the *pathology* of the blood may be improved by the experiments which Dr.

Scudamore has made, we shall not at present venture to determine.

"In the treatment of active inflammation, we are directed in the most essensial points, by the symptoms and particular state of the patient; but, even here, we may learn much from the characters of the blood; and in the management of chronic inflammation and some obscure forms of disease, in which the repetition of venesection becomes doubtful we derive, from a knowledge of the nature of the blood, a very material assistance to our judgment." *Pref.* iv.

The experiments are so very numerous, diversified, and circumstantial, that any attempt to convey an idea of them would be perfectly useless; we must therefore pass at once over one hundred pages, and as many experiments, to our author's "general conclusions and medical observations," from which we shall extract as much as our narrow limits and the nature of the subject will permit.

Although the action of heat in promoting, and of cold in retarding the coagulation of the blood, was pointed out by Hewson, that gentleman does not appear to have been aware of the great power of the former agent in accelerating coagulation. Dr. Scudamore's experiments authorize him, he thinks, to conclude that the period of time in which the blood coagulates, depends, in a great measure, on the quick or slow extrication of the carbonic acid gas. Its evolution takes place most freely as the blood begins to concrete, and ceases when coagulation is complete.

We shall pass over our author's observations on the theory started by Sir Everard Home respecting the formation of blood-vessels by the extrication of carbonic acid from the blood. All we shall say is, that the results of Dr. Scudamore's experiments were "remarkably in opposition," (no uncommon event among experimenters) to those of Sir Everard.

"It may be stated as a general rule, that blood coagulates in the shortest time, accordingly as it is of high specific gravity. Such is the blood of a strong and healthy person, as abounding most in red particles, which constitute the heaviest part of the blood. Mr. Hunter, in speaking of the red globules, remarks that "their use would seem to be connected with strength, for the stronger the animal the more it has of the red globules." The fibrin also belonging to such healthy blood is more dense than that of blood in disease, and hence the real explanation of a quick coagulation.

"The very marked difference of time in which the blood coagulates, accordingly *as the stream from the orifice is fast or slow*, appears to me to warrant the conclusion which I have stated, that the commencing part of the process of coagulation, namely, the escape of carbonic acid, does take place more readily when the blood flows very slowly.

"It appears that rest, merely, does not assist the coagulation of the blood. We see in how remarkable a manner cold delays coagulation of the blood in the basin; and how slowly it takes place when confined in a vessel of the living animal. Comparatively, also, as shown in Experiment xxxvi, the blood which was left perfectly at rest, coagulated more slowly than that portion which was gently stirred." 113.

If the blood be received into a metallic vessel the coagulation is slow, from the material being a free conductor of caloric; and the blood, separating more gradually into its component parts in the order of their specific gravity, will more probably exhibit the buffy coat than when a porcelain cup is used.

"In attempting to explain the coagulation of the blood, I should be induced to say that it depends on a new condition of the fibrin, which can only exist fluid in a state of intimate mixture with red particles, serum, and carbonic acid gas. Except in circulation or in living vessels, the fibrin will not maintain a union with the serum, although it does continue blended with red particles, either when extravasated in the living body, or when taken from the vessels. It is therefore the property of the fibrin to become solid when separated from the several principles just stated, constituting in union the mass which we call blood." 115.

It is found that sizy blood abounds more in serum than healthy blood—but the large quantity that appears (according to Dr. S.) is partly owing to its being forced out from the clot by the strong contraction of the fibrin. In such blood we find the coagulum distinguished by inverted edges, swimming in a large quantity of serum. It thus floats, because the proportion of fibrin, which is of the least specific gravity, exceeds the usual proportion which it bears to the red particles.

The buffy appearance of the blood has been usually accounted for by the slow coagulation of the lymph permitting the red globules, which are much larger and heavier, to sink before that process has taken place. But the fact most difficult of explanation is the variable proportion of fibrin in different cups of blood drawn at the same bleeding—sometimes a difference of more than half between the contents of two cups. It is in inflammation of the fibrous textures of the body that the greatest quantity of fibrin is found in the blood—for example, in inflammation of the heart, pleurisy, and acute rheumatism.

"I am led, therefore, to the idea, that, under such circumstances, the fibrin, instead of being distributed to the fibrous textures as usual in health, remains in excess in the blood. The textures in question would be injured by receiving their usual supply of fibrin, being now in a state of disease; and as regards the variation in the quantity of fibrin in different portions of blood drawn at the same time, it does not appear to me a difficult supposition that in the very short space of time occupied in venesection, the state of circulation should change, so that the capillary arteries at once make a different distribution of the fibrin; resuming in great measure their ordinary economy, and conveying it to the fibrous textures instead of returning it in unnatural excess to the venous circulation. The fact itself of the different proportions of fibrin in different cups of blood filled at the same venesection, is clearly proved. I know not any more probable theory to offer in explanation." 120.

We think the term theory is not quite applicable to the above—it is no more than a hypothesis.

We must refer our readers to Dr. Scudamore's work for his criticisms on Mr. Hunter's favourite doctrines respecting the life of the blood. Its coagulation and other changes out of the body are maintained by Dr. S. to depend on chymical more than vital causes. The influence, however, of the living principle in parts having contact with blood, is very manifest. Thus, if a leech survive its suction, and be examined several weeks afterward, the blood will be found grumous, but free from signs of decomposition, and will coagulate on being exposed.

Out of its proper vessels the blood coagulates in the living body, as in the cellular membrane, or in an aneurismal sac—and also in the vessels themselves, when they have lost their life.

> "We now arrive at the conclusion, that in all circumstances when the blood is in vessels forming part of the living body, even in animals which are torpid during the winter season, it is fluid; but coagulates, or maintains a disposition to coagulate, when the living power of the vessels has ceased, unless the putrefactive process has taken place more or less." 130.

We must pass over some chymical considerations, in order to devote more space to the medical.

In drawing blood by venesection, the physician's attention should be directed to the kind, orifice, state of the pulse, density, colour, and other appearances of the blood, its time of coagulation, the texture of the coagulum, and quality of the serum.

When the blood flows slowly, the coagulation takes place so soon, that the fibrin unites itself with the red particles very uniformly, and therefore does not present any appearance of the buffy coat, unless the blood be remarkably sizy.

> "I cannot, however, refrain from taking notice of a more important point as regards the stream of blood, namely, its remedial influence on disease. In venesection for the relief of inflammation, our object is not simply to diminish the quantity of circulating blood; but to diminish the action of the heart; and it may be affirmed, that twelve ounces of blood

drawn so quickly as to produce an immediate and decided effect on the pulse, will prove much more useful than a considerably larger quantity stolen away so slowly that the heart accommodates itself more easily to the loss. In a case of plethora, or apoplectic congestion, the same reasoning does not so exactly apply, because the absolute quantity of blood to be drawn is more to be considered. Invariably, however, a good orifice is important; and hence it is of great consequence that the operation of venesection should be well performed." 137.

To a certain extent and no farther, we agree with our author and many practitioners on the above points. We have watched pretty narrowly the phenomena and effects of venesection; and the result of our observations is, the conviction that some practitioners attach too much importance to the effect of *syncope* in checking inflammation. We are convinced, that if syncope take place before a considerable quantity of blood be withdrawn, in an internal inflammation, the object will not be gained, and reaction will come on as violent as ever. We therefore rarely or never order a patient to stand up while being bled, with the view of more quickly inducing faintness, but let that take place while the patient is sitting or recumbent. We repeat it, that unless a considerable quantity of the vital fluid be withdrawn, the induction of syncope will have but a very temporary effect on the inflammation of an internal organ, and that, by such a procedure, no economy of blood is effected in the end. We are advocates, of course, for a free issue of the blood through a proper orifice, though we look upon the rule laid down by the late Dr. Pemberton, and quoted by Dr. Scudamore (eight ounces in three minutes) as a mere refinement, worthy only of people who affect astonishing nicety and sagacity in the most trifling things. No two people bleed alike, however large or small may be the orifices, and therefore rules like the above are quite inapplicable to clinical practice.

We agree with Dr. Scudamore that, in dangerous inflammations, and especially peritoneal inflammation, the finger should be kept on the pulse, and the flow of blood allowed to continue, whatever the quantity, until hardness and frequency be distinctly reduced.

From the colour of the blood while issuing from the veins, little, we think, of a practical nature, is to be gained. In quick respiration, as in phthisis pulmonalis, the blood is florid; but if there be much difficulty of transmission through the lungs, it is generally of a very dark hue.

"The blood should be received in different cups; and the breakfast cup is the most suitable size. They should be put by in order, all in the same situation as to temperature, and not disturbed, so that we may be enabled to draw some useful inference of the effect produced on the circulation during the operation of venesection, by the relative appearances of the different portions of blood. In deciding upon the mere presence or absence of the fibrinous coat, we must particularly refer to the quick or slow stream in which the blood has flowed. In active inflammation of the fibrous texture, the formation of the buffy coat cannot be prevented, because the fibrin in the blood is in such excess; but when inflammatory action of the circulation does not much prevail, we shall learn more of the nature of blood, from examining its texture, than from merely viewing the surface of the coagulum. I consider that the texture of the coagulum and its degree of contraction indicate more of the actual state of the heart and arteries, than the mere presence or absence of the fibrinous coat. In the examination of blood taken away by cupping, we have to form our judgment chiefly from the texture of the coagulum, as to the eye it almost constantly presents a uniform appearance. In general terms, I may state, that a firm texture of the blood points out a strong action of the blood vessels, so as to give a presumptive sign that the bleeding has been proper; and vice versa, if the coagulum be remarkably loose in texture, we should particularly question the propriety of repeating the operation. I may further remark, that when the clot possesses uniform firmness, and has its edges turned inwards, we may conclude that the blood-vessels act more strongly than when it is soft in its texture throughout, and having a thin and flabby edge. The extreme toughness of the buffy coat itself, and this contrasted with the soft texture of the inferior part of the coagulum, is matter of familiar observation." 143.

In respect to the buffy coat, as indicative of inflammation, Dr. S. remarks, that an increased velocity of the circulation *alone* will not produce this phenomenon, as proved by experiment. It requires the continuance of disease to give rise to the buffy coat. It will not be found in blood drawn in the first few hours of inflammatory action. It is to be expected in diseases accompanied by much wasting, as in diabetes. In pregnancy it may depend on the same cause, for the rest of the body generally wastes while the uterine system is increasing. At the same time that buffy blood generally indicates inflammatory action in the system, no one surely would think of drawing blood, or continue to bleed from this symptom *alone*. The judicious practitioner will take all circumstances into consideration when he orders the detraction of blood.

Perhaps the most important part of this essay yet remains to be noticed, though it occupies but a few pages; namely, Dr. Scudamore's Observations on a Saturated Solution of Alum as a Styptic to bleeding Vessels. In conjunction with Mr. Wood, Dr. S. made experiments with this and other substances on the wounded arteries of a dog, and the result gave the palm of victory to the alum.

"The sulphate of copper, and still more Ruspini's styptic, had an effect upon the hæmorrhage proceeding from very small arterial branches, but not the slightest upon an artery of considerable size, which bled vehemently. On pouring the alum solution on this vessel, we were equally surprised and gratified to witness, that in about a quarter of a minute, the bleeding entirely ceased; and that it was thus effectually restrained by means of the tenacious coagulum so promptly formed, operating as a plug to the mouth of the vessel, was proved several times, by sponging away the coagulum, seeing the violent renewal of the hæmorrhage; repeating the application with perfect success; and so on." 157.

Our author has had some opportunities of witnessing the efficacy of this stypic applied to the human subject. In one case, where a carbuncle was laid open, the hæmorrhage could not be stopped till a saturated solution of alum was applied. The same was the case in a wound of the temporal artery by a scarification. The artery was divided but still the hæmorrhage continued, in spite of various styptics. The saturated solution quickly arrested the flow of blood. Some other cases are related.

The solution,* Dr. S. remarks, should be applied warm, as being still more coagulating than when cold, agreeably to the experiments detailed in his work. In the mean time, cold may easily be applied to the neighbouring parts, in order to diminish vascular action.

"In some cases of hæmorrhage from the unimpregnated uterus, and especially of the passive kind, I apprehend that the free injection of this solution would be attended with the most important advantage; and indeed I am sanguine enough to think, that, under certain circumstances of hæmorrhage after delivery, and the removal of the placenta, it will promptly prove a remedy for a state of eminent danger, when other means would probably fail. I should recommend the injection to be used tepid, by means of a proper and efficient apparatus, while, at the same time, if the urgency of the case should require such an additional step, cold might be employed externally on the abdomen, in the usual manner.

"In conversation with my friend Mr. Clarke, of Saville Row, I received the high sanction of his opinion, that the treatment, suitably applied, would be very proper. He does not apprehend that in the case of uterine hæmorrhage, any risk of mischief would arise from the free injection of this solution." 160.

Alum, it is well known, has been employed for centuries, as a styptic—but not in the form of a saturated solution, on which our author thinks its whole merit depends. Dr. S. has given the remedy, with success, internally, in a case of hæmoptysis, and in another of hæmatemesis. The infusion of roses with mucilage of acacia and a little syrup was the vehicle. The alum was taken in free doses, without any inconvenience to the stomach. Dr. S. will feel obliged to his professional brethren for any communication respecting the effects of this styptic (favourable or unfavourable) which may be founded in experience.

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* One ounce of cold distilled water holds completely in solution 31 grains of alum— an infusion of roses 34 grains.

X.

Pathological Observations, Part I. *on Dropsy, Purpura, and the Influenza of the latter end of the Year* 1822, *and beginning of that of* 1823; *and particularly on the Morbid Changes of the Blood, and their Influence on the Production and Course of these Diseases, illustrated by select Cases and Dissections.* By WILLIAM STOKER, M.D. Senior Physician to the Fever Hospital and House of Recovery, in Cork-Street, &c. &c. Octavo, pp. 244. Dublin, March, 1824.

"Officium Medici circa hominem Ægrum est sanare."

A CONSIDERABLE portion of Dr. Stoker's work is dedicated to the useful purpose of recalling the attention of the profession to the humoral pathology, as it is called, which, for a long period, has been too much neglected. Doubtless it had its share of errors, and perhaps more than its share of absurdities; but still we are convinced that it contained many truths which have been lost sight of since solidism prevailed. Cabanis has traced some of the causes which led to the downfal of the humoral pathology in the following descriptive but correct sketch of the evils resulting from the *abuse* of one of the most brilliant discoveries in physiology.

"The new light (says he) which was thrown upon the animal economy by this important discovery, (Harvey's Discovery of the Circulation of the Blood) served only to redouble the rage of systems. Nothing else was thought of but to cause the blood to circulate more freely, to destroy its viscosity, to draw off from the body that which was supposed to be corrupted, to purify it, correct it, and renew it, and to preserve the blood-vessels in a relaxed and pervious state. Hence those torrents of aqueous and diluent drinks, with which Bontekoe and his adherents inundated their patients. Hence that sanguinary fury, which the partisans of Botalli thought themselves entitled to exercise in their treatment of all sorts of diseases;—a fury which, though so often damped in some measure, by systematic murders, has ceased only for intervals, and still from time to time reappears in the schools. Hence, too, that wretched mania of the transfusion of blood, of which the practice almost always deprived those who had the temerity to subject themselves to so dangerous an operation, of their life, or their reason."* S.

We entirely agree with Dr. Stoker, that the candid inquirer and observer of the ratio symptomatum during life, and appearances post mortem, will frequently be forced to admit the justness of many of those observations on which the humoral pathology was founded—observations which go far to prove that the rise and course of diseases are by no means limited by those lines of demarcation which have so minutely divided the rival systems.

The neglect of the humoral pathology occasioned, of course, a neglect of the chymical analysis of the blood and fluids derived from it, in health and in disease—thus retarding the physiology of the fluids. The late experiments of Brande, Scudamore, and some others, together with the work now under review, will, we hope, invite more general attention to the subject, and lead to improvement in the knowledge and even the treatment of diseases. It must be evident, indeed, that the chyle is affected by the various kinds of food which we use. Indigo gives it a blue colour, madder and beet a red, several vegetables a green. We are informed by Richerand, that when chyle was collected (as at the Veterinary School in Alfort) and exposed to the air, it separated into two parts, the one forming a kind of gelatinous coagulum very thin, and not unlike the buffy coat of the blood—the other in greater quantity and liquid, rising above the coagulum, on its being detached from the sides of the cup to which it adhered. The coagulated mass is semi-transparent, of a light pink colour, and does not resemble the curd of milk, so that the similarity supposed to obtain between milk and chyle, does not exist. The lymph, which constantly unites with the chyle before the latter enters the sanguiferous system, on being received in a vessel by Mascagni, coagulated in eight or ten minutes—turned sour, and separated into two parts, the one more abundant, serous, with a fibrous coagulum in the middle, which, by contracting, formed into a small cake on the surface of the fluid. Hence Mascagni concluded, contrary to Hewson, that lymph consists, for the greatest part, of serum, and that fibrine constitutes its least part.

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* Cabanis, pp. 152. Henderson's translation.

That the blood undergoes some changes in the portal circulation is very probable; but what those changes are we do not yet know.

> "Experiments," says Dr. Stoker, "which I instituted more than twenty years ago, with a view to ascertain what was the difference between the state of the blood in the vena portæ, and of that as it enters the vena cava ascendens from the liver, though rude and incomplete, yet appeared to me to be at least decisive that in health blood is of lighter colour after than before its passage through the liver; and further, that on immersing blood of these different denominations in separate vessels of water at a high temperature, there was a remarkable portion of solid animal matter elevated to the surface of the water in which the blood of the vena cava was immersed, whilst no such appearance presented itself on the water in the other vessel."* 10.

The foregoing observations on humoral pathology are meant to apply chiefly to dropsy, purpura, and certain other diseases in which the symptoms being most palpable to the senses, their seat may be the more accurately determined. Our author begs to premise, that he places different forms of purpura, dropsy, and other diseases of vascular effusion under distinct heads, as appearing to arise in very opposite states of *vital power*, and in distinct conditions of the *fluids or solids*, or both. Those under the first head are denominated dynamic—those of the second, adynamic.†

But all this time we have passed over our author's preface, in which he informs us, that the object of the present publication is to present the profession with some of those facts collected during an extensive experience of 25 years in hospital and private practice. The "warm opposition" which our author anticipates is, we should hope, only imaginary. There is a greater leaning in men's minds towards the humoral pathology than they are willing to acknowledge, and therefore we anticipate a very candid and patient hearing for our author on the part of the public.

In this preface our author introduces a short detail of two cases, which, with many others, led him to undertake the present work. We do not see the very particular bearing of these cases on the subject of the work, but they are interesting in themselves, and therefore we shall notice them in this place.

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* "See Transactions of the Association of the King's and Queen's College of Physicians in Ireland. Vol. I. page 163 and 4."

† Dynamic from δυναμις, force. Adynamic is, of course, the reverse, or rather privation of strength. We do not see that these terms are better than the older ones of sthenic and asthenic.—*Rev.*

Case 1. Nov. 1820. A young lady, aged 11 years, had, in the preceding April, been bled for hepatic and pulmonary disease, threatening general dropsy, and succeeding a severe attack of scarlatina, the blood at the time being deeply and densely covered with buffy coat. Bleeding and mercurials had then been effectual. On going into the country she apparently recovered, and got more corpulent than previously. On the 19th of November, and without any premonitory symptoms, except slight headach, she became apoplectic.

"*First visit.*—At seven o'clock in the evening, I found her apparently moribund; the powers of speech, of swallowing, or any kind of voluntary motion, were totally suspended. Complete paralysis of the right side had taken place, and convulsions constantly agitated and distorted the other side. The left side of the face was much distorted, the mouth drawn to that side, and the palpebræ of the eye, and the eye itself, agitated with spasm; the muscles of the other eye, which lay open, and the pupil of which was dilated, seemed perfectly paralysed; pulse scarcely perceptible; had frequent and long intermissions; the skin clammy, and unequally warm; respiration quick and laborious.

"Surgeons Macklin and O'Reilly tried to draw blood by openings, made successively in the median vein of each arm, the jugular veins, and temporal artery, but ineffectually, as none flowed from these openings, though assisted by friction and fomentation. Leeches to the temples were then applied; the head was shaved and blistered; stimulant frictions, warm baths, and enemata, were then employed, but all with little apparent advantage, and I left my patient at midnight, though with an injunction to her attendants to persevere in the means in use, and as a *dernier resort* directed a blister to the right hypochondrium, yet with little ground for hope that she could survive the night.

"*Second visit.—November* 20.—Eight o'clock, A. M. I learned that at two o'clock, the pulse having previously become strong and quick, blood began to flow freely from the temporal artery that had been opened in the evening, and soon afterward the spasms ceased, the powers of speech and of motion were restored, the enemata were returned, bringing fæces along with them; and when about twelve ounces of blood had been discharged from the temple, the opening was secured by bandage, the patient drank freely of whey and fell asleep, continuing to sleep tranquilly to the time of my visit.

"On wakening her none of the symptoms (such as were detailed in the last visit) remained; but there was a high degree of pyrexia, which continued, notwithstanding venesection, and the use of aperients and sudorifics, for several days; and on the fourth day from that of the apoplectic attack, the eruption of measles appeared very generally over her face, body, and extremities, accompanied with the usual pulmonary affection; also with jaundice, and symptoms of derangement in the liver."

The measles, in this case, were attended with severe pulmonary symptoms and icteric fever; yet she convalesced and returned to the country, where "her recovery went on favourably for some time afterward." In the succeeding spring, however, our author learnt, with regret, from her medical attendant in the country, that hepatic disease became developed, which was succeeded by ascites, ending fatally in the ensuing summer.

The most remarkable circumstance, we think, in the foregoing case, is the apparently complete state of apoplexy and paralysis, in which Dr. Stoker found the patient. It is manifest, that there was no extravasation of blood, and that the compression could only proceed from turgidity of vessels. But how shall we explain the paralysis on one side?

Case 2. A gentleman, 52 years of age, had laboured for 20 years under inconvenient obesity, commencing after the suppression of a gleety discharge from the urethra, and augmented by full living and sedentary habits. He consulted Dr. Stoker in September 1821, on account of lethargic complaints of a growing tendency, notwithstanding the employment of purgatives, blisters, and an issue in the neck. Dr. S. found the obesity excessive, attended with alarming symptoms. The surface of his head, body, and extremities, was every where leucophlegmatic, and the lower extremities œdematous. His lethargic state, for some months previously, had incapacitated him for business, which state was attended with slight headach, vertigo, palpitations, and occasional loss of consciousness. His drowsiness was great; yet his appetite was keen, and he had no paralysis. Bleeding from the arm to 40 ounces, and leeches to the temples were repeated six times in the course of the ensuing six weeks—aided by abstemious diet, purgatives, antimonials, &c. By these means every symptom of distress was removed—his bulk was considerably diminished, and his mental and corporeal activity proportionally restored. He returned to his country seat "free from complaint." In the festivities of the ensuing Christmas, however, he returned to his old habits, which were followed by fits partly epileptic and partly apoplectic, leaving him in the intervals paralytic of the left side. When our author saw him in the commencement of 1822, a paroxysm had just taken place which terminated fatally.

We have said that we did not see the particular bearing of these two cases introduced in the preface, on the subject of humoral pathology. That the fluids were deranged in this last case, as well as the solids, there can be no doubt—for what part of the system can escape under intemperance in food and drink, with indolent and sedentary habits? The *plethora ad* *molem* appeared to play no inconsiderable part in the production of the symptoms in this case. At the same time there cannot be a doubt that there was a vitiated as well as redundant condition of the fluids.

We now pass on to Dr. Stoker's dynamic (or sthenic) cases of dropsy and purpura.

Case 1. A lady, 39 years of age, who had suckled nine healthy children, had been always accustomed to regular exercise, and had enjoyed good health, with the exception of occasional attacks of inflammatory sore throat. An attack of this kind, in December 1813, soon after the birth of her sixth child, was attended with severe oppression and difficulty of breathing, followed by soreness and stiffness in the joints of the lower extremities, which state was rapidly succeeded by œdema and purpura from the hips downwards, the purple spots varying from the 10th to 3d of an inch in diameter, being in some places confluent. Leeches, aperients, and blisters, were employed during the urgency of this attack, and subsequently her health was restored by generous diet, country air, and tonics. She had no return of the complaint till the winter of 1820, while nursing her ninth child. In this attack (preceded by pains of back and limbs, debility, scanty urine, constipation) the purpura was very deep-coloured over every part of the body, and the spots large, especially on the lower extremities. The accompanying anasarca was very general. She would not wean the child. Bleeding was not used. Under the exhibition of saline and mercurial medicines, succeeded by bark and wine, she recovered slowly from the external affections, but general debility continued a long time.

On the 25th December 1821, (while still suckling the same child, with a very scanty supply) she was again attacked with purpura and dropsical symptoms, in a very urgent degree—the œdema and purpura pervading every visible part of the body and limbs. The breathing was much oppressed, pulse 90, cough, much languor, tongue white, urine scanty, thirst urgent, pain of back and limbs severe, considerable pain and soreness to the touch in the *right* hypochondrium, the pain shooting towards the shoulder, and increased by the attempt to lie on the *left* side. Twelve ounces of blood were drawn from the arm, with considerable relief, and no tendency to syncope. The blood became buffed almost as soon as drawn. Aperients—expectorants—chicken broth. 26th. The purpura and anasarca have almost disappeared. The nursing was given over, and in a few days she went into the country, with directions to take a mercurial pill every other night, with some sulphate of magnesia every day, for the hepatic complaint. March 29, 1822. On returning from the country Dr. Stoker found considerable fulness in the right hypochondrium, the liver being perceptibly enlarged, very tender to the touch, with pain shooting to the shoulder, and extending towards the left hypochondrium. The face and eyes were jaundiced. Had, in the country, considerable sanguineous and purulent discharges almost daily with the fæces, or separately. She now complains of internal weakness, frequent palpitations, oppression of spirits. Ten leeches to the hypochondrium—six grains of blue pill at night—sulphate of magnesia in the morning. These produced a copious discharge of bilious fæces mixed with grumous blood, numerous ascarides, and purulent matter. The side less uneasy since the application of the leeches. To be rubbed with camphorated oil, and the mercurial pill to be continued at night. Salts in the morning.

When this plan was pursued for three weeks the mouth became slightly affected—the morbid condition of the liver gave way—but the dysenteric discharges continued, and in the succeeding June threatened ulceration of the intestines. The disease seemed to extend to the bladder and kidneys, as the urine itself held purulent matter in suspension, and was passed with great difficulty. All these symptoms gave way under the occasional use of the blue pill, assisted by a mixture of castor oil, oil of turpentine, mucilage, and peppermint water—also by the balsam copaiba. She has since twice become pregnant—and enjoys good health. The next case was not so fortunate. The details are minute and somewhat tedious; but we shall endeavour to give as condensed and connected a view of the case as in our power.

Case 2. 20th March, 1820. Mr. S——, aged 60 years, robust, full habit, sanguine temperament, had for many years been affected with hæmorrhoids, from which a copious monthly discharge took place. In the spring of 1819, after a longer interval than usual, he was attacked with very urgent symptoms of inflammation of the lungs and liver, which were relieved by copious bleeding, purgatives, expectorants, and blisters. From that time till within a week of the present date, he enjoyed good health. On the 13th of March he began to complain of pain in his limbs and back, with a general sense of oppression in every part. On the 19th the pains in his joints became very acute, and dark blotches appeared on his legs, his breathing being easily hurried. Castor oil—Dover's powder at night. 20th. Increase of all the symptoms, with an extensive and ill-coloured swelling of the fauces and palate. The teguments on the nose, forehead, cheeks, and ears, were of a jet black colour; the lips were everted, and so swelled, as was also the tongue, that the posterior part of the mouth and throat could not be distinctly seen; "but such parts as were visible, were of a dusky pearl colour, with the cuticle covering them elevated into one great vesicle, and distended with ill-coloured serum."

"Large black maculæ, some of them an inch in diameter, occupied portions of the surface on the arms, especially about the elbows, over the loins and sacrum, and still more extensively over the feet and legs. Both speech and swallowing were almost totally impeded; breathing laborious; pulse oppressed and intermitting; urine scanty, dark coloured, and turbid.

"Bleeding being firmly opposed by the friends of the patient, I did not deem it prudent to take the responsibility which, under such unfavourable circumstances, should attach to the employment of that or any other remedy, more especially as the external appearances were such as I had never seen before, and led me to apprehend that gangrene of the parts had already, or would soon commence."* 19.

Dr. Stoker desired a solution of tartar emetic to be given through a tube, till vomiting was excited—an enema of castor oil, turpentine, and barm to be thrown up—a blister to the external fauces—fomentations, gargles, &c. Camphor, jalap and opium to be exhibited through a tube. 21st. The swelling much increased, as is also the dark colour of the purpura—breathing very difficult—speech and swallowing almost entirely annihilated—skin hot and dry—pulse full and laborious in the right arm, feeble and intermitting in the left—thirst urgent.

"The right arm, being tied preparatory to bleeding, swelled suddenly and became livid, so that it was necessary to loose the bandage for a short time. The blood which flowed from the orifice made afterward in the arm, was remarkably dense and black, becoming buffed on the surface almost as soon as deposited in the cup; but as it flowed the patient breathed, spoke, and swallowed with more and more ease. When about 12 ounces were taken, syncope supervened, the pulse ceasing altogether; but on taking off the bandage, laying the patient in a horizontal posture, and fomenting the epigastrium with flannels and hot spirits, the pulse was soon found to return in the right arm, but not for several hours afterward in the left; the patient however expressed that he was much relieved." 21.

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* "The view which I took of the case at this time being influenced by the generally received opinions respecting the nature of Purpura, possibly prevented me from urging the necessity of bleeding, as I otherwise would; the case therefore appears to me the more instructive, and on that account I am led to publish its course with a degree of minuteness of detail which might be deemed unnecessary in ordinary cases." 19.

A blister inter scapulas—sol. sulph. mag. assisted by turpentine enemata—weak Madeira negus. The bandage accidentally came off, and he lost a considerable quantity of blood. Pulse feeble in the right arm—imperceptible in the left. Yet there was no apparent diminution of muscular strength, as the patient was able to get out of bed without difficulty. Purpura unchanged—two bilious stools—urine scanty and turbid—upper extremities anasarcous.

"Half past three o'clock, P. M. Having asked in the morning for a consultation, Doctor John Crampton now met me. The appearance of the face, trunk, and extremities, was now truly formidable, resembling that of a putrifying cadaver inhumed in hot weather; the patient, however, could speak and swallow better; the pulse still however continued weak, especially in the left arm. Still however there was no apparent diminution of muscular strength; the purpura on the hips and nates were very extensive, and tangibly elevated at the margin; the urine was scanty, holding extravasated blood in solution; stools were also scanty. The blood taken in the morning appears like one mass of size.

"In addition to the means previously in use, frequent and small doses of a solution of tartarized antimony and crystals of tartar were now prescribed." 22.

In the evening the patient found himself better—pulse firm and 100, but still unequal in the two arms. Three grains of blue pill and one of calomel to be taken every six hours till the bowels are freed. 22d. Rested well in the night—has had four bilious motions—cough and expectoration freer—swallowing and speech improved—purpura the same—swelling about the mouth and fauces reduced—tongue loaded and brown in the centre—upper extremities œdematous. The antimonial solution to be repeated. *Evening.* Has been very ill all day—the breathing most difficult—œdema of the arms increased—yet deglutition is more easy, and the pulse is fuller. Fifteen leeches around the anus—three grains of blue pill, and one of James's powder every four hours. 23d. He died this day, when they were preparing to bleed him. The dyspnœa had increased almost to suffocation, yet the pulse was full and firm. He expired in a sudden convulsion.

Dissection five hours after death. Externally the purple spots presented the same circumscribed extent, and the same jetty hue as before death. The liver was greatly enlarged, completely resembling the "*foie endurcie et engorgee par de matier muqueuse*" of Portal. Two gall-stones in the gall-bladder, each the size of a hazelnut—bile of an ochre colour, and extremely glutinous. Stomach perfectly sound. Large patches of purpura, resembling those on the external surface, were seen on several parts of the mucous membrane of the intestines. No change in the spleen, pancreas, or urinary bladder. In the thorax, the cartilages of the ribs were found firmly ossified. General adhesion of the costal and pulmonary pleura on the right side—slight on the left. No preternatural effusion in the chest or pericardium. Heart of natural size and colour, but loaded with fat. In its right ventricle a firm buffy coagulum was found, three inches in length, one inch and a half in breadth, and half an inch in depth, having two branches extending an inch and a half into the pulmonary arteries. This coagulum was so firm as to require considerable force of the fingers to break it. In every other vessel which was cut into, the blood was found perfectly fluid. No serum or red blood was found in the right ventricle or pulmonary veins. No further dissection was permitted, and the head was not examined.

Reflections by the Author on the above Cases.

The two cases above detailed of complicated dropsy and purpura, although they presented some variety in symptoms, predisposing causes, and result, were yet, Dr. S. thinks, sufficiently analogous to be classed together. The *exciting* causes, he believes, were the same in both—a morbid congestion or collection in the mesenteric, hepatic, and hæmorrhoidal vessels, the periodical discharges of which had frequently given relief in the last case. With its total suppression the symptoms of dropsy and purpura commenced. In both cases, oppression and pain preceded the dropsy and purpura—and these indications of partial or general plethora were relieved, though not in the same degree, by bleeding. An affection of the throat was common to both cases. The instances recorded by Sydenham, Darwin, Parry, and Blackall, appear to our author to be of the same nature, viz. *dynamic* dropsy or purpura, to be distinguished from diseases resembling them, and from their own *adynamic* kind, by the following diagnostic symptoms :—

"From Cynanche Maligna, by the absence of ulceration and fœtor in the throat, by not being attended with the same prostration of strength, and by the dropsical effusion being generally synchronous with the cuticular eruption; and lastly, by that siziness of the blood so remarkable in this form of these diseases. Besides that the gums are not spongy, as in scurvy, these forms of diseases may be further distinguished by the difference of the exciting causes; one set of symptoms mostly arising from suppressed discharges or eruptions, and the other generally from the privation of fresh vegetable diet or good air.

"The complicated cases of Dynamic Purpura with Dropsy may be distinguished from the Adynamic, by the former being preceded by greater degrees of muscular pains, and by symptoms of plethora, such as general oppression and labouring pulse; and finally, by the buffiness of the blood. The diagnostics of the simple forms of Purpura and

Dropsy will be mentioned subsequently, when these forms of disease are brought under consideration." 31.

The prognosis, in cases of the above kind, may be pretty accurately drawn, our author thinks, from the patient's report of the effects of venesection. If he express relief after the operation, and a corresponding improvement in the state of the pulse takes place, a favourable issue may be expected. On the other hand, if the patient feels much weaker, the pulse becoming more feeble, and the dropsical effusions not abating, the prospect is unfavourable.

That these congestions, or morbid accumulations in the hepatic, mesenteric, and hæmorrhoidal vessels—in other words, in the portal circle; as well as the morbid appearances of the blood itself, arise "from imperfect or irregular sanguification," is considered probable by our author, from a view of the two chief sources of supply to the sanguiferous system, "and the similarity of the fluid (in its colour and properties at these sources, and previously to its being submitted to the action of the lungs or liver) to the buffy coat;" an opinion which he has been further induced to think well founded from the results of a considerable number of observations lately made, at his request, on blood shortly after it was taken from persons labouring under various forms of disease, and nearly under the same circumstances.

The general oppression and severe articular pains, at the commencement of the cases detailed, together with the dyspnœa and oppressed pulse which succeeded, he attributes to the same cause. But the purpura and œdema, in these cases, seem owing not merely to plethora, but also to a change in the properties of the blood. To this morbid condition of the vital fluid he is also inclined to ascribe the temporary cessation of the pulse, unaccompanied by a corresponding loss of muscular power.

"The *post mortem* examinations which were made in the second case, of the parts previously occupied by disease, discovered no disorganization which could account for the symptoms detailed in the history of the case, and one appearance alone was presented, which could be fairly considered to give a satisfactory explanation of the cause and sudden manner of dissolution; that was the firm buffy coagulum found in the right ventricle of the heart, which was proved in this instance by many striking circumstances to have been formed before death, and also seemed to be a sufficient cause, and therefore to afford a satisfactory explanation of the manner in which that event took place."* 35.

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* We have, in another place, expressed our opinion, that the moderns are too sceptical as to the formation of these polypous concretions before death. We are

The blood drawn in the course of these diseases "*coagulated and became sizy at the same moment, and almost immediately after it flowed into the cups which received it*," showing that its sizy surface did not depend on slow coagulation.*

Here Dr. Stoker introduces a tabular view of 27 patients bled for various diseases, in the Fever Hospital; with a minute account of the appearances of the blood, and other circumstances which might be supposed to influence those appearances. These experiments rebut the idea that slow coagulation is necessary to the exhibition of the buffy coat. "The time of coagulation was never proportionate, but often inverse to the extent and degree in which that process took place."

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convinced, from many cases which we have examined, both before and after death, that these polypi do occasionally take place, and produce dreadful effects. Dr. Stoker is evidently of the same opinion.

* A series of experiments has lately been made at the Hotel Dieu, under the eye of Professor Recamier, on the coagulation and buffy coat of the blood, as influenced by the *mode* of drawing it, which deserve particular attention. We shall quote a single experiment as an example.

"*2d of August.* A man, 35 years of age, of athletic constitution, was selected. After a violent exertion, he was suffering much pain in the lumbar region. A vein was opened in each arm, *at the same instant.* In the *right* arm the orifice in the skin was *one line and a half* (French) in length—that in the vein *one line.* The stream was continuous, and three inches in projection, rather weak. The bleeding was stopped at the end of three minutes. *Left arm.* Orifice in the skin two lines—in the vein one line and a half—jet very strong, rapid, and continuous, projecting seven inches. Bleeding stopped at the end of two minutes. *Results.* The blood from the *right* arm presented no buff. The clot was of the ordinary consistence. The blood from the *left* arm presented a thin layer of buff, the clot and serum being similar to those of the blood from the other vein."

M. Belhomme (the experimenter under M. Recamier) has made about one hundred and fifty experiments on blood drawn in health and in disease. He has come to the conclusion that a medium orifice (one line in the vein)—a strong, rapid, and continuous jet, in the form of an arch—and a narrow vessel for the reception of the blood, are the circumstances most favourable for producing the buffy coat. In strongly inflammatory diseases, however, and in pregnancy, the buffy coat will appear in almost whatever way the blood is drawn. It is a curious fact, first noticed, we believe, by M. Belhomme, that the blood drawn from pregnant women exhales an odour precisely like that which rises from a newly extracted placenta. This, he thinks, may be a criterion of great importance in cases of doubtful pregnancy. We should be afraid to trust to so precarious a diagnostic. The subject, however, deserves attention. We agree with M. Duges in the following remark on the creeds of the Solidists and Humoralists. "Il ne serait pas moins déraisonnable d'adopter des indêes toutes contraires, et de nier les alterations du sang, ou de les croire indifferentes aux phénomènes de la santé et de la vie. Un juste milieu entre ces deux extrêmes est, sans doute, la véritable route suivre."—*Revue Medicale, Mars,* 1824.—Rev.

From these and other facts, our author is naturally led to question the explanation of a buffy coat from the mere subsiding of the red particles during the slow condensation of the lighter parts:—on the contrary, he thinks we are "warranted in supposing an altered and unhealthy state of the blood, exceeding the effects of mere agitation, takes place in the course of the circulation, either from want of due preparation of the fluids at the two chief sources of supply, and of the subsequent changes these fluids should undergo in their passage through the pulmonary, sanguiferous, and hepatic systems, or from the injurious effects of diseased functions in the organs of sanguification."*

"The colour and external characters which designate various kinds of buffy coat, being also found to indicate the particular functions engaged in producing them, afford additional arguments in favour of the foregoing opinions. In simple pneumonia, for example, as appears from inspection of the table, the coat on the blood is generally of a colourless white; but when tinged, it is with bright red, the depth of the tunic, seldom exceeding a few lines, and to this probably it is owing that the cupping on the surface of such blood is generally remarkable; the thin and tenacious film contracting as it forms, and drawing towards the centre the external margin at the circumference of the less contractile crassamentum."

"In simple forms of hepatic disease, on the contrary, the buffy covering is generally darker through its whole substance than in pneumonia, and is externally yellow. It occupies a large proportion of the solid part of the blood, and is not often cupped; when it is cupped, there is reason to suppose that the lungs are partly engaged.

"In diabetic complaints, which there is so much reason to believe originate in imperfect digestion, or insufficient preparation of chyle, it is well known that when blood is drawn it is often found covered over with a whitish milky-like fluid." 40.

In a conversation which our author had with Mr. Todd, Professor of Anatomy and Surgery in the College of Surgeons, he learnt that the opinions which led to the foregoing observations on the diagnostic characters of the buffy coat, coincide with that gentleman's extensive experience. Mr. Todd stated that, in passing through the wards of the hospital, to which he has been for many years surgeon, he could, on inspecting the cups of blood taken in different diseases, be able frequently to pronounce what organs were primarily affected or chiefly engaged in the disease—" that with the white and cupped surface having indicated the lungs to be the seat of disease, and that with the dark yellow colour and equal surface the liver."

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* See Dr. Scudamore's explanation of this circumstance in the review of his work, in the present number.

In making these remarks, our author does not mean to concur in the opinion that the buffy coat is always indicative of inflammation. On the contrary, he has often witnessed much of that appearance on the blood of some kinds of dropsy, where the patient had neither increased action of the vessels, nor any unusual sensation of pain or heat in any part. Again, in certain conditions of the mucous lining of the cavities, or of the viscera, when all other characters of inflammation were present, no buffy coat appeared on the blood when drawn.

"I am inclined, from what I have seen in such cases, to think that when inflammation is confined to the mucous membranes, the blood is not generally buffed; and that when it is in a sizy state, then the texture of the liver or lungs is directly engaged, or affected by sympathy with the parts concerned, so as to influence the condition of the functions in these organs." 42.

Our author now relates some cases of dynamic or inflammatory dropsy; but as they are similar to those related by Dr. Crampton and others, we shall only select a single case, as a specimen.

"*April the 7th*, 1823.—Mary Ryan, a mendicant, aged 20, was admitted into the Fever Hospital and House of Recovery in Cork-street, on the 2d inst. labouring under symptoms of congestive Pyrexia, which still continue; skin hot and dry, tongue loaded but soft, complains of headach and restlessness, pain and soreness in the right side; eyes slightly jaundiced. On examination the abdomen is found greatly enlarged, and distended with a fluid, fluctuation being distinctly perceptible; lower extremities anasarcous; has suffered slight indisposition occasionally from amenorrhœa which is of two years standing. Pulse 110 and hard, urine scanty and high coloured.

"Prescribed.—Let 10 ounces of blood be taken from the arm, and let her take five grains of mercurial pill three times a day. Let the abdomen be rubbed with camphorated oil for twenty minutes, three times a day, and swathed with flannel.

"*April the 8th.*—Twelve ounces of blood were taken from the arm in four minutes, and became solid in twelve minutes; it is now covered with a dark yellow and firm buffy coat, slightly cupped, the swelling and tension of the belly, as well as the pain and soreness of the side, are considerably diminished; she also feels much relieved from oppression, and had a good night's rest; urine three pints, depositing a copious brick-coloured sediment. Pulse 80, and soft; four bilious stools.

"Prescribed.—Let the pills and friction, as prescribed yesterday, be continued.

"*April the 9th.*—The ascites has been totally removed, neither is there any remnant of infiltration of the lower extremities; rests well, has a good appetite, and is free from complaint: states that the temporary attacks of indisposition with which she has been affected since the amenorrhœa commenced, generally come on monthly.

"Prescribed.—Let her have five grains of compound myrrh pill, and five of sulphate of iron, every second night, and the semicupium twice a week. M.B.

"*April 26th.*—Dismissed cured, having enjoyed uninterrupted health since last report. The catamenia, however, had not returned." 62.

This affords a good example of dropsical effusion depending on sanguineous congestion, as well as on an altered condition of the blood—both apparently owing to suppression of the catamenial discharge. The immediate relief obtained by bleeding showed that vascular power was merely suspended, and that when the cause of the distention was removed, the vessels recovered their due calibre and healthy functions.

"Although this is one of the simplest forms, perhaps, of dynamic dropsy arising from congestion, yet it was connected with marks of diseased action in the liver, which also demanded attention; these were the pain and soreness of the right side, the jaundice of the eyes, the loaded and brick-coloured sediment in the urine, and the yellow colour of the buffy coat. For these symptoms mercury was employed, as I have deemed that remedy to be always advisable as an assistant to bleeding in dropsies, where the blood is much buffed, but especially where that buff is of a yellow colour." 63.

ADYNAMIC DROPSY.

Debility, as it regards the loss both of constitutional vigour and vascular power, is the leading and essential characteristic of this kind of dropsy. Yet the line of demarcation between the two will be found frequently broken down, the irruptions being often mutual, so that the morbid symptoms sometimes actually change conditions. Yet, even so, important advantages may arise from having the primitive characteristics of the disease kept in recollection by some prominent designation. Of the various cases related under this head we shall only be able to introduce one or two—and that in a form considerably abridged.

Case. April 6th, 1823.—Margaret Reilly, ætat. 32, a mendicant, admitted into hospital on the 24th of March preceding, labouring under dysentery and ascites. The former complaint is relieved—the latter increased. The abdomen is distended and enlarged—sore to the touch—the fluctuation evident in all parts.

"The skin is dry, and of a pale olive colour,* the extremities emaciated, the eyes heavy and slightly jaundiced; pain of right side impedes a full inspiration. The stools are still frequent, but scanty, with severe tenesmus. Pulse 110 and hard, tongue brown; no appetite; rest disturbed: complains much of weakness. The dropsy commenced about three months ago. States that she was delivered of a still-born child, the only one she ever brought forth, almost nine years ago, that the catamenia have not appeared during the last five years, and that she has always suffered severely from poverty, bad diet, cold and nakedness.

"Prescribed.—Let eight ounces of blood be taken from the arm, let her have a draught with castor oil, and twenty drops of tincture of opium immediately; and let her have ten drops of tincture of digitalis three times a day. Let the belly be rubbed wih camphorated oil, and swathed with flannel. ℞. wine four ounces. 55.

She felt immediate relief from the bleeding. The eight ounces were drawn in three minutes, and became solid in fifteen: yet the coagulation was not firm at the end of 24 hours—no buff—the surface bluish, and very serous. The tension and pain of belly, together with the ascites, much abated—skin soft and better coloured—three pints of urine in the last 24 hours, straw-coloured and void of sediment—tongue cleaner—feels an appetite—slept well last night—four stools, with tenesmus. 8th. The ascites still less, but there is acute pain in the region of the heart—pulse 100, and hard. Venesection to eight ounces, and a blister to the right hypochondrium—seven grains of Dover's powder, 6tis. horis. 9th. Nine ounces of blood were taken yesterday with relief. It did not firmly coagulate—the surface was interspersed with small patches of yellow frothy buff—no return of pain since the bleeding—ascites further diminished—three quarts of urine since yesterday—tongue clean—appetite good—four stools with tenesmus. Eight grains of Dover's powder at night—twelve drops of tincture of digitalis twice a day. 10th. Ascites rather increased—skin and eyes slightly jaundiced. Blue pill. opium, and digitalis every eight hours. 12th. Things are amended—tongue clean, pulse natural—two natural stools. Medicines continued. 13th. Dysenteric symptoms returned, but no dropsical symptoms. These were removed by castor oil, opium, and mercury. Her health gradually improved under these medicines for the ensuing six weeks, the mercury being continued till the mouth became affected. She afterward had a relapse, and required bleeding, mercury, and digitalis, with occasional opiates. She was dismissed cured on the 10th May.

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* "This is the nearest description which I can give of that more than sallow colour of the skin, which characterizes the dropsy of debility so often to be met with among the poor of Dublin."

Our author observes that, in this case, the congestion, which led to the hydropic effusion was produced by two kinds of causes—1st, those long applied, in debilitating the vascular system—and 2dly, suppression of the various secretions, by which certain portions of the circulating mass are carried out of the system.

"That pale olive colour of the skin which accompanied this case, and which so remarkably characterizes those dropsies of debility, which are to be met with among our poor, as well as the jaundice of dropsies, is very generally found connected with diseased liver, and appears to me to arise from want either of due separation, or of complete union of the hydrocarbonous principles of the venous blood, which should take place in its passage through the liver. For the vessels of that organ, naturally tardy in their action, may be well supposed to be readily influenced by the debility which in such cases pervades the vascular system in general.

"This case appears to me instructive not only as indicating the *ratio symptomatum*, but as exhibiting an exquisite example of Adynamic dropsy changing its nature, under circumstances in which, according to very generally received opinions, that might be least expected to happen; for though combined with dysentery in general, a debilitating disease, yet it assumed such a character as to be relieved only by repeated blood-letting." 73.

We cannot follow Dr. Stoker through his train of pathological reflections on this case, though the reader will certainly benefit by their persual. We shall give, in conclusion, a short abstract of a long case, as there was an instructive dissection at the end.

Case. Elizabeth Lake, a mendicant, aged 24 years, had been admitted into the Fever Hospital on the 4th of March, labouring under obstinate dysentery. This, in some measure, gave way, after a variety of remedies had been used—but no mercury. On the 5th of April she came under Dr. Stoker's care. She then complained of general oppression, pain of back, tenesmus, want of rest. The integuments of the face, arms, lower extremities, and abdomen, all distended with water—the fluid gravitating towards the side on which she happened to lie. Ascites was also unequivocal—abdomen painful to the touch. This dropsical effusion had come on as soon as the dysentery was checked. Thirst urgent—tongue white—urine scanty—pulse 100 and hard—palpitation and pain at the heart. She had been long subject to piles. Venesection to eight ounces—an aperient. 6th. Felt almost immediate relief from the bleeding. The blood coagulated in 15 minutes, with a covering of a bluish but not firm texture, interspersed with a few spots of yellow buff. The abdomen is less painful since the bleeding—the anasarca diminished in every part. Three grains of blue pill, one of digitalis, and half a grain of opium to be taken thrice a day—a blister to the right hypochondrium. Dysentery now returned, and this they were unable to check. She died on the 24th of April.

Dissection. The cavity of the peritoneum contained about two quarts of a fluid, like whey, intermixed with portions of gelatinous lymph—resembling that found in an extensive chronic abscess. Internal surface of the peritoneum streaked, in many places, with red vessels, or coated with adherent lymph. The folds of the small intestines adhered together. Several hard livid tumours, varying in size from a crown piece to a sixpence, dispersed over the jejunum, which was morbidly thickened. On the internal surface of the intestine these tumours exhibited bloody points, and ulceration of the mucous membrane. Liver, spleen, pancreas, and kidneys healthy. In the thorax the lungs were found healthy—the heart adhering by soft gelatinous lymph to the internal surface of the pericardium at every point—its surface soft, and the organ smaller than usual.

In this case it will be seen that the inflammatory action supervened on dysentery: and, when relieved by bleeding, the dropsical effusion considerably abated. The nature of the abdominal and pericardiac effusion showed it to be decidedly of an inflammatory kind. The true and original seat of the disease, Dr. Stoker thinks, was in the small intestines—"the hard livid tumours being largest and most numerous near the duodenum, and, unless when ulcerated, being covered with the serous membrane of the intestines."

Here the incipient disease was discovered to be in livid tumours, exactly resembling piles after death, for so the anatomist expressed, as soon as he saw them; the colour of each tumour, as well as its seat in the vascular coat of the intestines, manifesting the accumulation of the blood on which it depended.

"The obstruction to the flow of blood, which led to its accumulation, may arise from loss of power in the vessels, or from cohesiveness of the blood, or from both these causes together, which last condition I believe to be the most frequent; and that the tumours, in this instance, were connected with loss of vascular power, as well as with morbid cohesiveness of the blood, is, I think, rendered probable by recollecting that the piles which this patient stated she had laboured under many months previously to the dysentery, were preceded by a long protracted fever, and that it was during recovery from it that the hæmorrhoidal excrescences appeared. The analogy between these tumours and piles would also lead us to a supposition, that they were connected partly with siziness of blood, as every practitioner in medicine of any experience must have observed how generally blood is buffed when drawn from those disposed to piles." 107.

We must pass almost entirely over Dr. Stoker's cases and observations on *adynamic and contagious* purpura, as our limits are drawing to a close. The subject of purpura too has been touched upon at the beginning of this article. The following case is an epitome of our author's *adynamic* instances.

Case. Nov. 19. Tobias Barry, aged 13, was received into Sir Patrick Dun's hospital, under Dr. Osborne. His skin was sprinkled over with numerous small maculæ of the colour of port wine, accompanied by a constant hæmorrhage from his gums, and a soreness in his throat. Pulse 132 and weak—bowels natural. This hæmorrhage had lasted (more or less) for six or seven days—the maculæ, however, were not observed 'till the day before admission. A blister—sulphuric acid—tincture of digitalis. 21st. The maculæ of a brighter colour—pulse 124—has had two fainting fits. 22d. Maculæ the same as before—has an offensive odour about him—breathing impeded, with a hoarse dry cough. 23d. The hæmorrhage rather diminished, but he died this day, without any violent symptoms.

Dissection. The spots on the skin were found to be produced by blood effused into the substance of the cutis, and not on its surface under the cuticle, as has been supposed.

"Spots, precisely resembling in appearance and mode of formation were found on the pleura, substance of the lungs, the pericardium, the surfaces and interior of the muscular substance of the heart, in the abdominal muscles, diaphragm, and all the muscles that were cut through in the course of the dissection, in the peritoneum, the substance of every part of the alimentary canal, and on its internal surface. Very few spots were found in the liver, kidneys, or spleen; and the latter organ was rather more firm than usual, and slightly enlarged, but its texture and colour perfectly natural. The bladder of urine had suffered most from the disease, the blood having been effused so largely into its substance that the internal tunic was elevated into a number of regular dark-coloured folds, which were so prominent as to materially diminish the cavity of the bladder. Some liquid blood was also found in it. With the exception of the above morbid appearances the viscera were perfectly healthy. A very few spots were seen in the integuments of the cranium and dura mater, but none in the substance of the brain. The blood throughout the body was remarkably fluid; and in place of any fulness of either the venous or arterial system there appeared to be rather a deficiency of the circulating fluid." 147.

Our author remarks that, viewed in contrast with dynamic purpura, this case shows how much such forms depend on a dissolved state of the blood, as well as relaxation of the vessels allowing of its transmission through minute exhalents, permeable only by colourless fluids in a healthy state.

Treatment of Dropsy and Purpura.

Most of the principles of treatment have been anticipated in the foregoing pages, while stating the cases. The practical remarks therefore under the present head may be brief. Dr. Stoker has a short section on prophylaxis, in which he shows the great importance of regulating the ingesta and egesta—or in other words, the functions of the chylopoietic organs. The Roman satirist observed the pernicious effects of indulgence in the pleasures of the table*—though there is strong reason to believe he liked his cup of *Falernian* as well as any man now living. In respect to medicinal treatment, Dr. Stoker places blood-letting, local and general, at the head of the remedial agents. Notwithstanding the excellent writings which have appeared from the pens of Blackall and others, there is still great prejudice against, or rather terror of the lancet in cases of dropsy and purpura. There is no doubt, however, among the well-informed practitioners, that two states or diatheses, of a very opposite kind, exist in these diseases—one of vascular power, and the other of debility, requiring very different modes of treatment. In the former, cautious blood-letting is highly beneficial—in the latter it is often, if not generally, injurious.

"The chief points to be ascertained in employing venesection in dropsy and purpura, appear to me to be first, the nature of the existing causes, whether such as would affect the quantity or quality of the circulating mass, either by obstruction to its natural outlets, or injury of any of the functions by which its healthy state was preserved.—Secondly, that the state of muscular power, or capability of vascular action, as evinced by capability of exertion, and by a vigorous resistance in the vessels to the morbid accumulation of their contents, be not materially impaired.—And, lastly, that the patient expreses relief from the blood drawn on the preceding indications, that it be firmly coagulated, and if buffed, it will afford additional grounds for hope of further relief by the repetition of the remedy.

"The indications therefore of blood-letting in dropsy and purpura should be, strength of the patient not materially diminished, increased vascular action evinced by strong pulse and increased temperature, relief of oppression, and of pain immediately felt after the operation, and the subsidence afterward, though not for a few hours, perhaps, of the dropsical swellings." 159.

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* "Crescit indulgens sibi dirus hydrops,
Nec sitim pellet, &c."—Hor.

Our author very properly advises caution in blood-letting, in dropsies where the cavities engaged contain a vital organ. Thus in hydropericardium, there may be such a temporary increase of effusion, during the excitement which succeeds venesection, as to overwhelm the heart and destroy its function. When such a cavity has appeared distended with hydropic fluid, of the dynamic kind, our author has always thought it advisable to precede venesection by topical bleeding and blisters, and by the internal use of digitalis and antimony.

The modus operandi of blood-letting, both local and general, in relieving dropsy, is elucidated, our author thinks, on the principle of increased absorption, as insisted on by Dr. Paris, Magendie, and others.*

The modi operandi of blisters, antimonials, mercurials, digitalis, need little comment. Our author traces an intimate connexion between the diseases under consideration and biliary derangement—hence he strenuously recommends blisters to the right hypochondrium as of extraordinary efficacy "in tendencies to dropsical or purpural effusion."

"The symptom accompanying such effusive tendencies, which has led me chiefly to connect them with diseased function of the liver, and thence to this remedy, demands particular notice on that account, and also as one always indicating extreme danger, and sometimes offering a fatal prognostic.

"This symptom is either obstinate grass green vomiting, such as attended on some of the worst cases both of purpura and dropsy admitted latterly into our hospital, or the still deeper green alvine discharges which so generally accompany hydrocephalus, and effusions on the brain in bad fevers." 167.

We perfectly agree with Dr. Stoker in his remarks on the *chymical theory* which has been set forth respecting those green stools which we so frequently see in the diseases of children.

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* Our tropical practitioners long ago observed that congestion or plethora about the head prevented the absorption and action of remedies, as of mercury for instance;—and they bled to remove this plethora and accelerate the introduction of remedies. "This oppressed state of the sensorium renders the absorbent system so torpid that there is no chance of mercury being taken into the constitution. *Evacuations, under these circumstances, by relieving the brain, invariably accelerate ptyalism.*" Johnson on Tropical Climates, 1st Edition, (1813) page 207. This passage unequivocally proves that the experiments of Magendie and the remarks of Dr. Paris were anticipated by observations made at the bed-side long before.

If they were attributable *merely to acidities* in the primæ viæ we should have them much more frequently. The theory is entirely negatived by the fact that in dyspeptic subjects, who are harassed with acidities in the primæ viæ we rarely have green—and very often pale or clay-coloured stools. Others have attributed these spinage-looking evacuations to the calomel administered. We have repeatedly seen them where no calomel had been given. We consider them as *disordered secretions* originally, whose colour may possibly be modified by medicines taken into, or acids generated in the digestive organs, but which cannot be produced from healthy secretions by either of the above agencies. If examined, they will be found entirely destitute of the real fœcal smell.

> "For without some morbid change, the accidental admixture of an acid would not produce a green colour; such as Doctor Heberden in his commentaries asserts, he found in the urine of a certain jaundiced patient, which was, when first passed, of a deep yellow. I am farther warranted, I think, in this opinion, by the absence of such green colour, unless accompanied by urgent symptoms of disorder in the hepatic system. If this colour was produced simply by mixing an acid with mere bile, that symptom must be as frequent as acidity in the *primæ viæ*, which is well known not to be the case." 175.

Antimonials. Dr. Stoker has a high opinion of antimony in dropsical diseases, as stimulating the various secretory organs to a better discharge of their functions. He has combined antimonials with mercury in dropsies, with much advantage. And in the cure of certain stages of dropsy, where tonics were indicated, but where their employment alone excited fever, as cinchona, steel, &c. he found that inconvenience frequently corrected by the addition of antimonials.

Mercury. This, of course, is an important and old-established remedy in dropsies. It may, either alone or combined with other medicines, be directed to various organs, and made purgative, diuretic, sudorific, or expectorant.

> "It possesses, however, other qualities besides those of mere stimulants which extend the scope of its utility in some forms of those diseases, whilst they limit it in others.
>
> "These other qualities which I mean are, that of entering and changing the condition of the mass of blood itself, and of interrupting such a morbid train of actions in the functions of the part affected, as habit, in proportion to the time of its continuance, had tended to establish.
>
> "When the intention is to promote or increase the alvine discharge, mercury, under the form of calomel, may be usefully employed, combined with jalap, scammony, gamboge, or elaterium, according to the degree of the purgative effect which the prescriber proposes,

and under the same form its stimulus may be combined with squills or antimonials, so as to increase the sorbefacient, expectorant, sudorific, or diuretic effects of these remedies.

"It is however in those cases of effusive diseases, connected with sizy blood arising from imperfect sanguification in the lungs or in the liver, but especially in the latter, that mercury can be beneficially employed in such a manner as to enter the sanguiferous system, and thus influence the condition of the blood itself, as well as that of the function engaged. When administered with a secondary intention, mercury, reduced to an oxyde by trituration, given internally, or by external friction, is to be preferred; and in cases of laxity of the bowels may be advantageously combined with opium." 179.

With the above extract we must conclude our review of Dr. Stoker's work, which contains more of good practical matter than ingenious reasoning—especially in these days of anti-humoral pathology. In the composition, Dr. S. has been rather inattentive, and errors of the press are to be seen in almost every page. These, of course, we consider as very trifling blemishes, but still, as they are so easily obviated they ought to be avoided. We shall again pay our respects to Dr. Stoker, in our next Number, when reviewing his Observations on the Epidemic Influenza of 1822-3. In the mean time we part from him with feelings of much respect and consideration.

XI.

Lettera del Dottore Giacomo Clark *al Professore* Giacomo Tommasini *intorno alla Letteratura Medica Inglese.* Pp. 47. Roma, 1823.

In our Number for June 1822, we noticed, with commendation, Dr. Clark's *Italian* defence of the Edinburgh School of Medicine, against the attack made on it, or rather against the erroneous view given of it, by the celebrated Bolognese professor, Tommasini. In this vindication of his alma mater, Dr. Clark incidentally noticed Tommasini's very imperfect acquaintance with the medical literature of this country, as evinced in several parts of his discourse, observing that, if he (Tommasini) had been better acquainted with our *good* authors, he would have formed a higher opinion of British Medicine, both scientific and practical. This insinuation of defective knowledge of a matter, respecting which it would have been, indeed, wonderful if his knowledge had not been defective,—seems to have considerably excited the personal and patriotic feelings of the Professor, who forthwith indites and publishes a Reply to Dr. Clark, intended, at once, to be a justification of his former statements, and a further and more decisive proof of his acquaintance with our medical literature. As might have been expected, he failed egregiously in the latter particular; and quite as much, or more so, in respect of the authors cited, as of those omitted by him. As, however, this pretended account of our medical literature, and the view of our medical doctrine and practice thence derived, presented the semblance, at least, of being founded on fact,—was the deliberate and avowed production of a man justly esteemed for his talents and extensive erudition, and who, moreover, might naturally be considered as peculiarly qualified for the task he had undertaken, on account of his recent visit to England,—and, finally, as it was submitted to readers who were at least as ignorant of the subject as the author;—Dr. Clark thought it necessary once more to break a lance with the redoubted Italian, and to attempt to do that for British medicine in general, which he had already so successfully done for the clinical school of Edinburgh. This attempt is now before us in the form of an *Italian* letter, of 47 pages, addresed to Tommasini; and we must say, after an attentive perusal, that the essay has been most successful, the author having acquitted himself in a manner infinitely creditable to him as a gentleman, a scholar, and a British physician. In this little work we scarcely know which most to admire, the author's thorough knowledge of his subject and complete discomfiture of his opponent, or the gentle yet firm and dignified tone in which his object is accomplished. Indeed, we do not remember to have read any thing of a controversial nature that left us less to regret, both in matter and manner, than the pamphlet before us; and while we congratulate the author on such honourable testimonies of his temper, his talents, and his learning, we congratulate ourselves and our professional brethren in this country, on having so able an advocate, of their cause, in the field of foreign literature.

As the little work of Dr. Clark is, nevertheless, interesting to us rather as a literary curiosity, than as containing matters calculated to instruct the well-informed members of the profession in this country, we shall content ourselves, in this place, with a few brief notices of its more important contents, taken at random from its pages.

In our review of Dr. Clark's former letter, we gave a detailed account of that most valuable institution the Clinical School of Edinburgh. The same subject is again slightly touched on in the present letter. Dr. Clark readily concedes to Tommasini, that, in some respects, the Italian system of instruction is more favourable for the student, but that it is certainly less humane towards the patient. The system of *lecturing* (for such it is) on the disease, in the presence of the patient is, unquestionably, cruel and disgusting in the highest degree; and, as Dr. C. observes, would not be submitted to by the inmates of a British hospital.

"I have myself (says Dr. C.) heard this done at the bedside of a poor *consumptive* patient; and a friend of mine was lately present when the same practice was adopted in a case of *cancer uteri*: at the end of the exposition, the poor woman burst into a flood of tears." And, truly, no wonder! Dr. Clark, however, admits that another branch of the Italian method—that, namely, of consigning the treatment of patients, under the superintendence of the professor, to the more advanced students, might be adopted with much advantage in this country. In this we entirely agree with him.

It has long been a common subject of complaint with the medical writers of this country, that their discoveries and improvements were overlooked or disregarded by continental authors, more especially the French, until such time as they had acquired a sort of right and title by adoption, transformation, or intermarriage, to be considered as legitimate productions of their *foster-land*. Then, indeed, they never failed to be introduced to the savans of their new country, with all the pride, pomp, and circumstance to which they were intrinsically and extrinsically entitled. It is true that similar complaints were made, and still continue to be made, of us, on the other side of the channel; we think, however, (in all candour and honesty,) with decidedly less reason on the part of our accusers. And we think the difference in this particular may be very simply and satisfactorily explained, without any illiberal or offensive reference to national character, by the mere fact of the languages of the countries alluded to being much better, and much more generally understood in England, than our language is on the Continent. We think it must be admitted by every one capable, from personal observation, of judging, that for one Frenchman who understands English, there are twenty Englishmen who understand French. The same is true, but in a lesser degree, of the Italians and English; and, in a still lesser degree, of the Germans and English. Be this as it may, it is sufficiently certain that the French and Italian medical authors betray lamentable ignorance of our literature. A very striking and indeed amusing instance of this is now before us in the letter of Tommasini (one of the best informed foreigners, be it remembered) to Dr. Clark. In his first letter, Dr. C. as we have already remarked, expressed his opinion of his opponent's imperfect acquaintance with our best authors (naming several of these.) Tommasini, in his reply, not only admits the full merit of the writers cited by Dr. C. but adds several others, equally meritorious, not cited by him; but with the following countervailing stigma: "To these authors (says he) I could oppose too great a number of authors equally modern, but of quite a different stamp;" and then subjoins the following selection of authorities, e. g. "*Raven* (on Cholchicum in Hysteria, &c.) *Gaikskell* (on Nux Vomica in Palsy, &c.) *Jutliffe* (on Opium in Tetanus,) *Hutchinson* (on Tic Douloureux,) *Dewees* (on Guaiacum in Amenorrhœa,) *Sameson* and *Gough Parker* (on the Nitrate of Silver in Epilepsy,) *Hamen* (on Blood-letting in Hydrocephalus, *Witlam* (on Cicuta,) *Wansbrough* (on Digitalis in Phthisis, &c.) *Copland* (on Chorea,) and *Willan* (on Cutaneous Diseases.")

Without seeing it, one could scarcely believe that such an instance of ignorance could attach to the character of a meritorious and learned author. The lesson it ought to teach, however, is, not to despise our neighbours, but to make us more cautious than we are, in deciding on the true merits of foreign writers, and on the general spirit of foreign literature and science. Well might Dr. Clark say, on perusing the above list, that "the mere inspection of the *names* of these *authors* suffices of itself, without further argument, to show the slight value of opinions founded on such authorities;" and we are not surprised to find that, with the exception of those of Drs. Willan and Copland, the *names* even of these *authors* were unknown to Dr. Clark, and that he was forced to trouble his friends in England, more than once, before he could gain any intelligence of them! The truth is, that Tommasini's materials were principally derived from our periodical journals, and that he was either unable or unwilling to discriminate between the crude effusions of the ignorant student, and the matured labours of learning and experience.

This accounts not only for the particular selection made, but for the mixing up, in the same record, of names of just and respectable authority, with others of no authority at all. Indeed, several of the names quoted have, we are quite sure, no substantial bearers in this country; and we sincerely regret that nor head nor ears exist to be "ravished with the whistling of a name," or "damned to everlasting fame," in the erudite pages of the professor of Bologna.* Ignorance and error of a precisely similar kind are charged, by Dr. Clark, on BROUSSAIS, in his pretended examination of the medical doctrines of England, in which we find the names of obscure contributors to periodical journals making as conspicuous a figure as in the more temperate exposition of Tommasini. In joining with Dr. Clark in this unqualified condemnation of Broussais's View of British Medicine, which is truly *astonishingly* meagre, and, we may even add, contemptible—we think it necessary to join with him, also, in yielding our highest respect and regard for that distinguished author, and to admit, that we have derived much pleasure and profit from the examination, and, we will add, adoption (in part at least) of his original and profound pathological doctrines.

After exposing his opponent's ignorance of our medical literature by an examination of the authorities adduced by him, Dr. Clark proceeds to lay before him a correct view of the really standard works that have appeared in England during the present century. This list is neatly and clearly arranged under the heads of the diseases that affect the different organs; and includes the full titles of more than a hundred works, with concise remarks on the nature and character of several of them. We regret that our limits will not permit us to transfer to our pages this catalogue raisonnee of our recent medical authors; as we are convinced it would not be without its use to the junior members of the profession, even in this country;—as a standard of reference, and a guide for them to our recent literature, it must be of vast benefit to the physicians of Italy and France.

In combating the professor's charge of *empiricism* brought against our practical medicine, our author has many just and forcible observations which our limits forbid us to notice. We must content ourselves with a few detached extracts.

> "It is indeed true," says Dr. Clark, "that in England we have no

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* Like appreciations of British medical authority must be familiar to those much accustomed to the perusal of foreign authors. "Whence comes it," says a recent Italian writer, according to Dr. Clark, "whence comes it, that BUCHAN *and* CULLEN are of a very different opinion?" *Buchan* AND *Cullen*!! In another place Dr. C. remarks, "We observe in Italian medical books, from Borsieri downwards, *Buchan* is cited as an authority; *Thomas* is at present quoted as a *celebrated author*; and, latterly, the book even of REECE HIMSELF ("*di Reece stesso*") has been translated, doubtless under a false impression of its character." p. 5. After *this last* piece of information, it would certainly be only wasting words to endeavour to confirm the belief of the false estimate of British medicine entertained by the Italians.

general doctrine—no grand and all-explaining theory; not, indeed, because there exists any dislike to rational theory, but because there exists a firm conviction that the degree of our knowledge is at present too limited to authorize the formation of a theory capable of explaining the intimate nature of our various diseases, and, still less of explaining the mode of action of the medicines employed in their cure." 37.

"Although the term *diathesis* is not received in England in the same sense as in Italy, British practitioners are not, on this account, less desirous of distinguishing diseases according to their essential characters, or less diligent in their researches for their *true pathology;* nor are they backward in generalizing their observations founded on such researches, and in applying the results to practice—provided always, that these results are based on a faithful induction of facts. When, however, this basis is wanting, as I apprehend it must frequently be to those who vaunt most of their theory—In this case, the English physician is not ashamed to return to empiricisms, which, however despised by modern theorists, we are obliged, nevertheless, humbly to confess to be, in the actual state of our knowledge, at once the best resource of the practitioner, and the best safeguard of the patient against the pernicious consequences of theory. And here I beg to be understood as speaking not of that blind empiricism which is the offspring of ignorance and presumption, but of that philosophical empiricism, which is the result of observation and sound experience. At the same time, I am far from embracing the cause of empiricism. I admit its utility only when we are abandoned by the light of true pathology. I am even ready to confess that it has exercised, and still exercises an undue influence over the minds of many English practitioners. This, perhaps, may be justly considered as a natural consequence of the unsatisfactory results of all medical theories. That the better class, however, of British practitioners are influenced by a very different spirit, is sufficiently manifest from the works already quoted, &c. &c.

"That many works of a different character are to be found in England, I am far from denying; but, in every country, the number of insignificant is always greater than that of good writers." 39.

In reply to Tommasini's boast of the refutation of the Brunonian doctrine being left for foreigners, Dr. Clark gives the following home stroke to his antagonist.

"The so much vaunted glory of confuting the doctrines of the *Scottish Reformer*, is now right willingly abandoned by his countrymen, to the writers of those nations who were the victims of his errors. In Great Britain, at the time of the promulgation of the system of Brown, medical science was too much enlightened to be either seduced by its specious allurements, or led astray from the true path of observation, or cheated out of the experience of ages." 40.

In proof of the general spirit of zeal and intelligence with which medicine is at present cultivated in England, Dr. Clark

refers to the vast extent of our medical publications, and the number and value of our periodical journals. We shall conclude our notice of this interesting publication with the author's brief comparison of the English and Italian schools.

> "The labours of the Italian physician are conducted with the view of supporting a doubtful theory; those of the English, in the design of amassing materials whence may eventually be composed a theory that will not pass away. If the English school is characterized by a spirit of extreme caution in the admission of facts, and by a philosophy perhaps too strict, in deducing general principles from these: the Italian school appears to me to be characterized by too great a facility in admitting facts, and too great a precipitancy in deducing consequences. Which of these defects is most hurtful to the student, I leave others to decide: to me it appears that the effect of the *former* is to excite in the youthful mind a love for observation, a commendable diligence and circumspection in the examination of facts, and a philosophic caution in drawing conclusions; and that of the *latter*, rather to withdraw the attention from observation, and to supply the place of this with an overweening confidence in theory." 46.

We here take our leave of our able and excellent author, and beg to thank him, in the name of our profession and country, for the noble and triumphant manner in which, "in strands afar remote," he has defended the cause of BRITISH MEDICINE.

XII.

A Treatise on Syphilis; exhibiting the Advantages of large Doses of the Submuriate of Mercury in the Cure of that Disease; also, an Inquiry into the Modus Operandi of Mercury. Illustrated by Experiments. By JAMES BOYLE, Esq. one of the Surgeons to the United Institution of London and Westminster for the treatment of Lying-in Women, and Children, &c. &c. Octavo, pp. 166. London, March, 1824.

THE question respecting the *possibility* of curing syphilis without mercury appears now to be nearly at rest, by being answered in the affirmative. But, very few, we imagine, avail themselves of this piece of knowledge; and of those few who do, some have had cause to repent their experiments, by losing their patients, and with them some part of their reputation. We are every day more and more convinced of the general superiority of the mercurial over the non-mercurial practice in the venereal disease, though exceptions will occur, from time to time, where it will be prudent to suspend or omit the specific, and trust to low living, quietude, and gentle evacuations for the eradication of the disease. The question to which we dedicate the present short article is this—*is the slow introduction of mercury into the system, for the cure of primary sores, (as now practised) more effectual or safe than a rapid introduction of the same?* We have not sufficient experience on this point ourselves to give a decided opinion; but we will furnish our readers with some evidence, of a very strong kind, which rests on the experience of others.

In the month of March, 1818, Mr. Boyle, author of the work before us, published in the MEDICO-CHIRURGICAL JOURNAL, (Monthly Series,) a letter on the subject of curing primary sores in an expeditious manner by large doses of mercury, adducing cases to prove the eligibility of the plan. Mr. Boyle there observes that, in many cases of syphilis which he had seen, the patients continued under a mercurial course for several weeks, without experiencing ptyalism, or any favourable change in the disease; "but when, from accidental circumstance, any of these patients happened to be confined to bed, in an apartment where the air was close, a violent salivation would suddenly break out, followed by the almost immediate healing of the chancres." Reflecting on this phenomenon, Mr. B. imagined that a single dose of mercury, if sufficiently large to induce ptyalism, might effect a cure in recent venereal infection. Being then in His Majesty's ship Prometheus, he had soon an opportunity of putting his theory to the test of experience, and the cases are detailed in the above-mentioned journal, to which we must refer. We may state, however, that he found large doses of calomel neither produce violent salivation, nor violent purging. In the cases detailed, the mouth was sore about the third day, and the chancres were healed about the tenth. The dose of the calomel was generally a scruple, twice a day. The most rigid regimen was enjoined, with warmth and confinement.

In the month of May, 1818, Mr. Cunningham, a very able and experienced surgeon in the Royal Navy, and without any knowledge of Mr. Boyle's experiments, published a paper in the same journal, and upon the same subject—namely, "on the advantages of exhibiting submuriate of mercury, in scruple doses, in the cure of syphilis." He states that, for 12 years previously, he had been in the habit of treating a considerable number of cases in this way, as his journals at the Navy Medical Board would show. He has published the details of several of these cases in the medical journal above mentioned, and to it we refer. Mr. Cunningham's practice was a scruple once or twice a day—the mercurial sore mouth coming on in two or three days, and the sores being healed in a few days afterward.

"The foregoing," says he, "which are a most faithful transcript from the original cases, I hope will be deemed quite sufficient to establish a striking testimony of the rapidity with which calomel, administered in scruple doses, impregnates the system, and consequently subverts the syphilitic virus. They prove, too, that the remedy may be employed in that proportion with perfect safety to the patient—for from many hundreds of such doses, which I have been constantly in the habit of giving since 1806, in the climate of this country, and in all seasons, not only for the cure of syphilis, but, with admirable benefit, in febrile and other affections, as dysentery, hepatitis, &c. I have never observed, in a single instance, any alarming, or even untoward effect."*

We now come to Mr. Boyle's autograph, published in the beginning of the present year, on the subject of syphilis, and more especially on this modification of treatment, strengthened by seven years' farther experience. As a preliminary argument in favour of the speedy administration of mercury, as contrasted with the usual slow process, our author introduces the following query.

"If, for example, two patients, under precisely the same circumstances, entered on means of cure at the same time; the one shall be put under a five weeks course of mercury, so conducted as to make the mouth sensibly affected at the end of that time, at which time also his sores or other venereal symptoms shall have disappeared. If again the other patient's mouth shall be affected in two days, his sores heal in four or five after, and the salivary glands continue in a state of excitation for six or eight days more:—I ask, which of these patients is likely to suffer most from the effects of the disease and the remedy? why assuredly, if we admit the venereal to be a disease capable of acting upon the constitution generally, we can have no hesitation in saying, the sooner that power is destroyed the less injurious will be its effects on that constitution; and the reverse of this, on procrastination." 103.

In support of the above, he quotes passages from John Hunter, Benjamin Bell, Mr. Geoghegan, &c. We shall offer one of the quotations from John Hunter.

"Mercury should be given, if possible, so as to produce sensible effects upon some part of the body, and in the largest quantity that can be given within certain bounds; and that these sensible effects should be the means of determining how far the medicine may be pushed in order to have its best effects upon the disease without endangering the constitution. The practice here must vary according to circumstances; if the disease is in a violent degree, less regard must be had to the constitution, and the mercury is to be thrown in in larger quantities; but if the disease be mild, it is not necessary to go beyond that rule, although it is better to keep up to it, in order to cure the disease the sooner.' " 107.

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* Med. Chir. Journal, vol. v. p. 367.

Mr. Boyle then goes on to the detail of numerous cases treated, since the year 1817, on the plan in question. To these cases we must refer the surgical reader, merely stating that they appear to bear the author out in his proposal for this modification of practice. Extracts of letters are also introduced from Mr. Bowen, Mr. Reid, and Mr. Cunningham, of the Royal Navy, all in corroboration of the same.

The work contains a great deal of curious and original observation, but the overstepped limits of our Review department compel us here to bring this short notice to a close—recommending to the attention of our surgical brethren the contents of Mr. Boyle's little volume.

XIII.

Quarterly Periscope

OF

PRACTICAL MEDICINE;

BEING THE

Spirit of the Public Journals,

FOREIGN AND DOMESTIC.

I.

PHYSIOLOGY.

> ———————— latas a numine leges
> Religiosa doce, mentesque cupidine veri
> Allice.

1. *Therapeutical Physiology, or Medical Miracles.*[*] Who has not heard of the wonder-working prayers of Prince Hohenloe? Are we to consider these cures as falsehoods, and the parties, active and passive, as impostors? We are not of that opinion. We believe that some—perhaps most—of the cures were actually performed, and that through the agency of mind on matter. We cannot be so uncharitable as to suppose that the patients have wilfully deceived the world, however they may be deceived themselves in respect to the interference of a supernatural power in their behalf. We dare not say so much for the INTERCESSOR. And yet it is possible that Dr. Hohenloe may be so vain and superstitious as to believe he has the ear of the Almighty in Heaven, in the same way as subjects are supposed to have the ear of Majesty on Earth.

These miraculous cures have not excited much attention in this country. They served to fill columns in the newspapers, and make the vulgar stare; but the philosophic part of the community looked upon them as the mere workings of the imagination on the corporeal fabric, instances of which are every day presented to the attentive observer. In Ireland, however, where the odium theologicum is heightened by the odium politicum, these occurrences have become a new cause of dissension, and have been discussed with all the bitterness of religious and political animosity.

The plentitude of power, in the miracle line, so long claimed by the Church of Rome, has dwindled, in modern times, to a very low ebb indeed. Is this to be attributed to the increase of *faith* in mankind, rendering divine manifestations unnecessary? or is it to be placed to the account of a prudent reluctance on the part of the priesthood to appeal to *miracles* in so *inquiring* an age as the present? Be that as it may, the exploits of Prince Hohenloe have revived the drooping spirits of the Roman Catholic Clergy, whose bishops, in their pastoral letters, "*announce, with great joy, a splendid miracle which the Almighty had wrought even in our own days, and in the midst of ourselves.*"* This "splendid miracle," which we expected could not be less than a conversion of the river Shannon into claret, at least, resolves itself into the simple fact that, a young lady, Miss Lalor, recovered the use of her tongue after the dreadful punishment of six years' silence! We have little doubt that Miss Lalor will make up for lost time, now that she has recovered the use of such an important organ.

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[*] An attempt to explain, on natural principles, the cures alleged to be miraculous of Miss Lalor and Mrs. Stuart. By a physician.

The pastoral letter of Bishop Doyle was soon followed by another from the pen of Archbishop Murray, announcing the miraculous cure of a nun in the convent of Ranelagh, effected "*by the supernatural interference of the divine power through the intercession of Prince Hohenloe.*" The *credibility* of this last miracle is attempted to be strengthened by certain medical testimonies. According to Dr. Mills, "the complaint (of the Ranelagh nun) was generally of an apoplectic tendency;" while, by Dr. Cheyne, the lady is described "*as being an ailing person, having laboured under determination of blood to the head, and various* NERVOUS *affections of an* ANOMALOUS *character.*" From this statement, not very *clear* in itself, it must be perfectly clear to our readers that the Ranelagh nun was a most excellent subject for a miracle. We accordingly find her "a great sufferer" on the 31st of July; but, mirabile dictu! on the 4th of August, she "*assured her physicians that she was without complaint.*" Why, the passage of the Red Sea by Moses, or the supply of manna to the Isrealites in the wilderness, was nothing compared to this!

That the splendour of such a miracle should dazzle the optics of the Catholics is not to be wondered at; and accordingly they see nothing in the transaction but "the finger of God"†—a proof "that the Almighty God had thus visited his people, reanimating their faith, and reviving their hope."‡ Yet there is a party of reasoners in the Emerald Isle, who, scorning all reference to natural principles, freely admit the reality of the miracles, but discover in them, not "the finger of God," but of "the DEVIL;" "to whom (it seems) the exertions of the Bible Society have given a most serious alarm," and therefore his Satanic majesty is lending a hand to the Catholics, whose object, of course, is to keep people in the dark! We accordingly find a red hot SAINT from the Bible Association assuring his reverend antagonist, Bishop Doyle, "that he has *great pleasure* in the miracles; inasmuch as it is evidence that the church whence they proceed is the MOTHER of HARLOTS!!"

As we can have no hope of reconciling these ultra-superstitious parties to one another, we shall leave them to debate on the celestial or infernal origin of the miracles, while we revert upon our former declaration (which is also the creed of the able author of the pamphlet before us,) namely, that the cures were real—not through the intercession but the *influence* of the Prince Hohenloe—and that the patients were not impostors. It is melancholy, however, to think that, in the present enlightened era, there should be numbers of people, among the learned bodies too, so superstitious, or rather so insane, as to believe that there are individuals on this little obscure planet who are taken into the councils of the Omnipotent Creator—

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* Bishop of Leighlin and Fernes's pastoral letter.

† Archbishop Murray's letter.

‡ Bishop Doyle's letter.

" ———————Chosen from above
" To work exceeding miracles on earth."

Our author accounts for these supposed miracles in the only rational manner, by referring them to the great influence which moral emotions exert over the functions and even the structure of the body.

"But there are certain moral feelings which have a power not only to derange the *functions*, but to destroy the *structure* of certain organs; thus, long-protracted grief produces diseases of the liver, heart, and lungs; and the anatomist who examines the body which has sunk under the workings of a wounded spirit, will find the sentiment embodied in the disorganized liver, the tuberculated lungs, or the flaccid and extenuated heart. Again, diseases of physical origin in the heart, liver, or lungs, excite the corresponding moral affections with which these organs are associated; thus a palpitating heart fills the bosom with vague terrors, and a torpid liver entails all the horrors of hypochondriasis.

" The yellow bile that on your bosom floats,
" Engenders all those melancholy thoughts.
" DRYDEN." 13.

If the moral emotions be capable of producing disease, they may also, under certain circumstances, be capable (though more rarely) of effecting cures—especially where there is no organic disease; and no instance of organic disease has been proved in any of the patients. It may be remarked, that it is almost invariably women (who are far more susceptible of moral impressions than men) who have been the "chosen vessels" for enthusiasm, and the most approved subjects for delusion. It was well observed by the sagacious Selden, that "when priests come into a family, they do as a man who would set fire to a house—he does not put his torch to the brick wall; but he thrusts it into the thatch—*so the priests work upon the women, but let the men alone.*"

In the cases of Miss Lalor and Mrs. Stuart, our author could not discover any evidence whatever of change of structure, but merely long continued *nervous affection*—a sufficient explanation of the *suddenness* of the cure. It is difficult to conceive (as our author well observes) a situation better calculated to exalt the imagination, and engross every faculty of the soul, than that of a young enthusiast, who hopeless of relief from severe suffering, throws herself on the Divine mercy, believing that at *that instant* her case is specially commended to his mercy by one who has already found favour in his sight. She feels that her fate is in suspense—adds prayer to prayer—finds her enthusiasm increase and her corporeal sufferings consequently diminish—imagines the Deity is relenting—and at length sinks to the ground, overwhelmed by the force of her gratitude and her love.* No wonder that such a moral conflict should occasionally work a revolution in the nervous system of a hysterical or hypochondriacal female. And this is the whole secret.

We would add one word of advice to our brethren. They should never, on any account whatever, give oral or written testimonies that can, in the remotest manner, countenance these delusions. We do not, for a moment, suppose that such respectable physicians as Drs. Cheyne and Mills have given improper testimonials—but we do think that it was imprudent to give any testimonials at all. No physician should suffer his name to appear in connexion with superstitions that disgrace the age in which we live. These things should be left to needy, ignorant, and unprincipled adventurers, who, as in Johannah Southcoate's case, caught at the tide of popular credulity, to raise themselves into temporary notice—soon to sink beneath its waves in utter contempt, never to rise again!

The illustrations, which our author appends to his little work, of the influence of the mind over the body, are apposite enough, and might be extended *ad infinitum*. We return him many thanks for his ingenious and entertaining brochure.

2. *Functions of the Brain.* M. Flourens's experiments, of which we gave some account in a former number, tend to show that the encephalon is composed of several parts *performing essentially distinct functions.* To explain the reason why certain substances introduced into the vascular or digestive apparatus, while acting on the brain, produce phenomena essentially different, M. Flourens has made numerous experiments. From these experiments he thinks himself authorized to conclude, that each medicinal or other substance produces its proper or specific effect on some particular part of the brain. The experiments themselves not having reached us, we can only give the results. These are:—1st, That, up to a determinate dose, opium acts exclusively on the cerebral lobes; belladonna on the copora quadrigemina; and alcohol on the cerebellum.

2d. That the physical results of the action of each of these substances on each of these parts are absolutely the same as those from mechanical lesion of these parts. As, for example, when a substance acts only on the lobes of the cerebrum, the functions of those lobes are alone injured: when on the cerebellum solely, those of this organ are deranged; and when on the corpora quadrigemina, those of this organ are injured, &c.

3d. That the action of each substance always leaves, after death, and points out, even during life, signs which may serve to distinguish the affected organ from the others.

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* Mrs. Stuart's Affidavit.

4th. That camphor, æthers, &c. act in a manner analogous to alcohol; the watery extracts of henbane and bitter lettuce, &c. in a way similar to opium, &c.

The experiments on which the above are founded have been repeated before Cuvier, Humboldt, Portal, Dumeril, &c. who were commissioned by the institute to report upon the memoire.—*Revue Med.*

We refer our readers to some remarks which we have made on these kinds of experiments, as performed by M. Magendie, at the end of this department of the Periscope.

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3. *Loss of Speech and Hearing.* Mr. Thompson, of Whitehaven, has related a curious case of this kind in the April number of the Medical Repository. A female child, in her 18th month, was suddenly seized with convulsions, after which she was observed to have lost her speech and likewise her hearing. But her vivacity remained, and her health was unimpaired. In this state she continued till her sixteenth year, when after the noise of a public rejoicing, she was observed to have recovered the sense of hearing, and soon afterward she began to articulate, but made slow progress.

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4. *Rudiments of a Fœtus in the Abdomen of a Boy.* We have never attached much importance to the marvellous in medicine. They are far more curious than useful. They sometimes illustrate Physiology; but are incapable of contributing to the improvement of any other branch of medical science. Cases of monstrosity, for instance, are more eagerly listened to than the most instructive cases of pathology; and therefore we must sail occasionally with the current of human curiosity, though we shall indulge that passion rather less than some of our neighbours. The fœtus found in the abdomen of a boy, in this country, a few years ago, excited nearly as much attention as Bonaparte's return from Elba, and since that period several other remarkable localities for the germ of man have been discovered. A case was lately read at the Medico-Chirurgical Society of the rudiments of a fœtus in the thorax of a woman who was supposed to labour under disease of the heart. At length an abscess burst, and discharged a misshapen mass having jaw bones, teeth, and other portions of human structure in its involucra. The able author of the paper now before us [M. Breschet] has also transmitted to the same society a drawing of a fœtus found in the substance of the uterus itself, whither it had doubtless made its way from the fallopian tube, in its descent from the ovary to the cavity of the womb.

The case before us happened several years ago, but the particulars have never before been regularly published.

Case. Amedee Bissieu was born in the year 1790, during the storms of the revolution, by which his mother was greatly agitated while pregnant. The child was very feeble, but lived. From the time he was able to speak he complained of pain in the left side of his chest and abdomen, which side was more protuberant than the right, giving rise to suspicion, at one time, that there was curvature of the spine. The young Amedée, however, grew up, went to school, and even became an expert rider. He still complained of his side. When in his 14th year he was suddenly seized with acute pain in the left side and left hypochondrium, accompanied by fever. A tumour now appeared in the lower part of the abdomen, for which he was bled and purged. The fever continued, and the tumour made progress. On the 7th day of this attack, M. Blanche, a surgeon, examined him, and ascertained the existence of a tumour the size of a melon in the left side of the abdomen. The youth died in the same year, six months from the invasion of the last attack, worn out, of course, with hectic fever.*

On dissection, a large membranous pouch was found, adhering to all the neighbouring parts, and particularly to the colon, between which and the pouch there was a communication. When the pouch was opened it was found to contain a purulent looking fluid, and two bodies of nearly equal size. One of these consisted of hairs matted together, and formed into a ball the size of a man's fist. The other was an imperfect fœtus, consisting of flesh, bones, &c. covered with skin. From the middle of this mass a short and thick ligament passed to the parietes of the cyst, to which it was attached.

Some doubts having been expressed by the faculty respecting the sex of Bissieu, the corpse was afterward disinterred and minutely examined, when there was not found any thing to disprove his being of the masculine gender.

A great many pages are taken up with minute descriptions of the monstrosity; but these we do not deem it necessary to dwell upon.—*Archives.*

5. *Superfœtation.* As this process is doubted still by many physiologists, the following case, on the authority of Drs. Norton and Stearns, (from the New-York Medical Repository,) is deserving of a place in our records of facts.

On the 20th October, 1823, Dr. Norton was called to Mary Johnson, a woman of colour, aged 24 years, and of robust constitution, who had been in labour about two hours before Dr. N.'s arrival. She was quickly delivered of a *perfectly black child*, one month prematurely, according to the mother's reckoning. The child lived only two hours. On attempting to introduce the hand for the extraction of the placenta, the vagina was found so contracted as to prevent that operation. At the end of six hours Dr. Stearns was called in, in consultation, who advised the exhibition of ergot of rye. This was given in the ordinary doses, and soon produced its usual effects on the uterus. A quantity of water was first discharged, followed by a well-formed fœtus, apparently of four months, and *perfectly white.* The umbilical cord was separated, and the child showed some signs of life. The placenta came away readily, and the mother recovered quickly. Both fœtuses are preserved by Dr. Norton, and have been shown to numerous medical men of New-York, who all agreed as to the entire difference of colour—of size—of developement of parts—of the epochs of conception (an interval of at least four months)—and finally of fathers—one being a white and the other a negro.

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* Six weeks before the patient's death he passed by stool a small ball of hairs.

On the above case (which certainly appears to be well authenticated) we shall only observe that there is some little difficulty in explaining the cause why one child should have been *perfectly* white and the other *perfectly* black, admitting that the fathers of them had been so. It is a general law in fœtation that the progeny shall have a hue *intermediate* between the father and mother, when these last are of different colours, as is instanced on a large scale in the mulatto race. In the present case, by a woman of colour is meant, of course, a mulatto woman. Between her and a white man the progeny would be *nearly* white—between her and a negro, the child would be *nearly* black—but not *perfectly* white or black, as is represented by Drs. Norton and Stearns. The difference of hue, however, in a case of superfœtation of this kind, and, under these circumstances, would be so great as to authorize the terms white and black.

6. *Functions of the Corpora Striata and Tubercula Quadrigemina.*

By M. MAGENDIE.

None can entertain a higher degree of respect for the talents, the zeal, and the "improbus labor" of M. Magendie than ourselves. But we confess that the extent to which vivisections are now carried by that illustrious physiologist and others on the Continent, begins to stagger us a little. Our readers will not accuse us of any affected sensibility or squeamishness respecting experiments on animals, where any important point of practice—or even *physiology* is likely to be elucidated thereby. But when, from mere curiosity, we get into habits of slicing animals to death, in the most slow and cruel manner, merely to observe the phenomena presented by the tortured subjects of these experiments, we cannot but recoil, and inquire whether the results of these vivisections are likely to compensate for the quantum of unutterable and unimaginable torture inflicted on animals placed under our dominion by the "Father of All," for our comfort and use, but not for our abuse. We put it to the good sense, the humanity, and the professional knowledge of our brethren, whether *therapeutics* are ever likely to be improved by such experiments as the following—on the *action of medicines*.

"In the course which I gave this winter (says M. Magendie) on the *action of medicines*, I had placed in the ventricles of the brain a grain of emetic tartar, in powder, and by chance the substance was more especially in contact with the corpora striata. After the antimonial had remained there for a quarter of an hour, all the assistants, as well as myself, were not a little surprised to observe the *animal spring forward* *and run with surprising agility.** I know not how many *conjectures* passed in our minds, without the true one (conjecture) occurring to us: but, on repeating this experiment, and observing that the corpora striata were *nearly destroyed* by the chymical action of the emetic tartar, I recognised the real cause of the phenomena: so that the *integrity* of the corpora striata, in their white portion, is connected with the direction of *motion* and the *will.*"—*Journal de Phys. Octobre.* 378.

Now to our very plain and humble understandings it does appear somewhat extraordinary that, if the *integrity* of the corpora striata be connected with *motion* and *will*, their almost total *destruction* by tartar emetic should cause the animals to "spring forward and run with surprising agility." If these be the illuminations resulting from slicing the brains of animals—be darkness and a clear conscience our lot!

In fine, we beg to hazard our *conjecture* also—and it is, that the real functions of the different parts of the brain will not be discovered by slicing them down in living animals.

II.

PATHOLOGY.

> Actio læsa suum designat singula morbum;
> Preterea morbum partis mutatio signat.

1. *Application of the Stethoscope to the Diagnosis of Aneurisms of the Aorta.*† It is not supposed that aneurism of the aorta was recognised, before the time of Vesalius; and even during the 16th century the knowledge of aortic dilatations made little progress. During the last 20 or 30 years, pathological anatomy has been so diligently cultivated that the diseases of this important vessel are now familiar to every practitioner, but the diagnosis of these diseases is not so easy a matter. It is, in fact, exceedingly difficult by the ordinary means of examination, to distinguish between disease of the heart and disease of the aorta, unless the *latter* appears externally, when, of course, there would be no merit in the diagnosis. It is on this account that Dr. Ferrus brings forward two cases where substernal aneurism was recognised during life, without any external indication being present.

Case 1. Jean Hivet, 65 years of age, entered the hospital Cochin on the 28th of November, 1822. He had experienced, for three years past, palpitations of the heart and affections of the breath, which he attributed to numerous colds which he had caught. A fresh cold in September forced him to give up work, and seek refuge in an hospital. The following were the phenomena presented by the patient at the time of his entry. Complexion sallow,—heaviness about the head, with vertigo, numbness of the lower extremities—cough, with thick expectoration—anhelation on the least exercise—sense of weakness about the epigastric region—tongue red and partially coated—inappetency and nausea—irregular pulse, intermitting and not in rhythm with the action of the heart.

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* "S'elancer en avant et courir avec une agilité singuliere." P. 378.

† Dr. Ferrus, Physician to the Saltpetriere. Archives Generales, Dec. 1823.

Auscultation. The respiratory murmur was heard throughout the whole circumference of the chest, and sufficiently loud. The pulsations of the heart could also be heard in every part of the chest. When the stethoscope was applied to the præcordial region, the pulsations of the ventricles were found to be very unequal, intermittent, but clear and sonorous. *Under the sternum and cartilages of the first ribs on the right side, were heard simple pulsations, accompanied by a hissing noise.* The contractions of the auricles were plainly heard towards the clavicles, but very confusedly in the region of the heart itself.

Diagnosis. Aneurismal hypertrophy of the ventricles—substernal aneurism of the aorta. We need not detail the prescriptions and sequel of the case. He died on the 13th of January, 1823.

Dissection. More than a pint of bloody serum in the left cavity of the chest. The lungs sound—mucous membrane of the trachea and bronchia red—vessels of the pericardium injected—heart, containing enormous clots of blood, one-third larger than natural—right cavities of this organ presenting nothing remarkable, except some redness of the lining membrane—left cavities dilated, especially the left ventricle, which was thrice its natural size—its parietes were much thickened—ascending arch of the aorta dilated into an aneurismal sac, the size of a man's fist—the descending aorta was indurated in its coats, but not sensibly dilated in its calibre. Its internal lining was red. There were traces of inflammation in the abdomen, both on the peritoneal and mucous membranes. In the head, the meninges were slightly thickened, and in the ventricles was contained a considerable quantity of serous effusion.

Case 2. Peter Pinson, 35 years of age, entered the Cochin Hospital on the 20th of May, 1823. He had experienced, for several years, a difficulty of breathing, augmented in the attempt to go up a flight of stairs, attended by palpitation of the heart. To these he paid little attention till within these three months, when the palpitation and dyspnœa became so increased, complicated with gastric derangements, that he was forced to seek hospital relief. On examination at the hospital, he presented the following phenomena:—face livid and swelled—infiltration of the lower extremities—oppression—orthopnœa—inability to procure sleep—startin[illegible]m short slumbers—pulse regular, without frequency; full, vibrating in the right arm—very small in the left—cough, with viscid expectoration.

Diagnosis by Auscultation. The mucous rattling (rale muqueux) heard throughout every part of the chest—very strong pulsations perceptible under the sternum, and cartilages of the superior ribs on the *right side*, accompanied by a hissing noise, very distinct. This noise was also very audible in the præcordial region, covering, as it were, the pulsations of the heart. The disease was therefore pronounced to be as follows:—aneurism of the ascending aorta—hypertrophia of the heart—bronchial catarrh. Bleeding, and various means were tried, but without relief. He lingered out a wretched existence, till the 2d of July, when death put a period to his sufferings.

Dissection. A considerable quantity of sero-sanguineous effusion in the chest on both sides—heart thrice its natural size—aneurism of the substernal aorta the size of a child's head at birth, filling a great part of the thoracic cavity. The parietes of the left ventricle were an inch or more in thickness, and its cavity surprisingly dilated. The left auriculo-ventricular orifice was in a natural state—but that of the right side was very much enlarged, and its valves reddened, as was the lining membrane of the cavities. The lungs were greatly compressed by the enlarged heart and aorta—the mucous membrane of the trachea and bronchiæ was red, and covered with mucus. The liver and spleen were gorged with blood.

On the pathognominic Symptoms of Aortic Aneurism. Corvisart acknowledged that there was obscurity in these symptoms, unless the aneurismal tumour became visible or tangible. The symptoms enumerated by Corvisart, as indicating aorta dilatation, are, a wheezing noise in the respiration, a certain rustling sound heard over that part of the chest where the aneurism is situated, a dull sound emitted on percussion, smallness or irregularity of the pulse. These, it must be acknowledged, are not always present in aneurism—and are sometimes present where there is no aneurism. The only certain diagnostic symptom, therefore, according to the author of this paper is—*pulsation in the region of the aneurism itself, as heard through the stethoscope.*

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2. *Hydrophobia.* John Brassendale, 30 years of age, was bitten by a dog, which, four days afterward, was killed with symptoms of madness. Caustic was liberally applied to the wound, three days after the bite. On the 28th of October the man showed difficulty of swallowing and unequivocal hydrophobia was too soon developed. Purgative clysters, laudanum in large doses, the warm bath, blisters to the chest, the muriatic acid, &c. were tried without effect.

Dissection. In the head nothing particular was observed, except a slight distention of the vessels of the pia mater. The mucous membrane of the larynx and trachea was red with turgid vessels. The inner surface of the œsophagus presented marks of phlogosis. In the stomach inflammation had run on almost to sphacelus. In the jejunum also were spots of a similar description.

In another case of hydrophobia which came under Dr. Bardsley's care in the Manchester Infirmary, death took place on the seventh day from the commencement of pain in the bitten part, and 56 hours after the symptoms of unequivocal hydrophobia had been developed. In this case there was turgescence of vessels about the basis of the brain, with some effusion there. No inflammation in the pharynx, larynx, or trachea. The internal membrane of the œsophagus and stomach was inflamed and studded with purple spots.

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3. *Cases of Neuralgia simulating Disease of the Brain.* By Dr. MARTINET.*

Sudden and temporary attacks of *paralysis* are very embarrassing to the practitioner sometimes. We so generally associate the idea of paralysis with pressure on the brain or spinal marrow, that we usually take a gloomy view of such cases; and yet they are not always dependent on cerebral disease—at least that kind of disease which produces apoplexy and regular paralysis. Rheumatism, affections of the digestive organs, and even mental emotions, seem occasionally to determine these paralytic seizures.

Case 1. A woman, 60 years of age, enjoying good health previously, and leading a sedentary life, was taken all at once, on the 1st of June, 1822, with considerable loss of power in the right lower extremity, attended by a pain running in the direction of the sciatic nerve. On the 10th of the same month she complained of dull pain and sense of formication in the lumbar region of the same side. On the 12th, she felt darting pains radiating along the temple, forehead, and superior palpebra of the same side. On the 15th there was drawing of the mouth to the left, while the inferior jaw was also distorted from its usual apposition to the upper. On the 16th there was embarrassment of speech, the mouth being still more drawn to one side, with superficial pain, at intervals, in the facial nerves of that side. There was no febrile movement in the system; but the appetite was impaired. An emetic of ipecacuan was exhibited, and operated well, but produced no effect on the complaint. On the 17th the mouth still drawn—difficulty and pain in moving the right thigh—painful dartings along the scalp, and deep-seated pain in the right side of the head. These symptoms continued unchanged for three days. 21st. Tongue coated; uneasiness at the epigastrium; the other symptoms still persisting. Ten leeches to the anus—purgation by sulphate of soda. 22d. Mouth less drawn—speech more distinct—diminution of hemicrania and facial pain—no difference in the loins, thigh, and leg. Eight leeches behind the right ear—the same number to the loin—and a purgative of sulphate of magnesia. In ten days more the whole of the symptoms had gradually disappeared.

Dr. Martinet comes to the conclusion, that these phenomena could not have depended on affection of the brain, but on neuralgia. "The same cause," says he, "which exalted the sensibility of the sciatic, lumbar, and facial nerves, determined paralyis of the small branches going to their respective muscles." The absence of paralysis in the upper extremity is also in favour of our author's pathology; for where the brain is in fault, the paralysis usually shows itself first in the thoracic members.

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* Revue Medicale, Janvier, 1824.

Case 2. Louis-Joseph, aged 59 years, had been subject to irregular attacks of pain in his head from the age of 30. He had also occasional fits of palpitation, augmented by work (he was a copper-founder) and various moral affections. In the month of September last his headach increased, and on the 25th he was seized with the following symptoms, while going up to his work-shop:—general shivering—increase of the cephalalgia—embarrassment of speech—sudden pain in the cheek, temple, arm, thorax, and lower extremity of the left side, with sense of formication and considerable diminution of muscular power, so that he was obliged to be carried back to his apartment. In a few days these symptoms so far subsided that he tried to walk out a little, but was soon visited with a return of all the symptoms above desribed. On the 1st of October he entered the Hotel Dieu. Here the symptoms continued for several days, but gradually diminished, and at length entirely disappeared, under mild diaphoretics, and the application of fumigations to the side affected. M. Recamier, under whom the patient was, did not hesitate to consider it as neuralgia, having seen several other cases of a similar description, all of which got well by fumigations. We would only just remark that, when the symptoms are equivocal at first, the safest plan would be to act as if the brain were the organ in fault. Evacuations can do little harm, for a while at least, in neuralgia, but the neglect of them might be of the worst consequence in cerebral affection inducing paralytic symptoms.

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4. *Inflammation of the Semilunar Ganglia.* Professor Lobstein has written largely on the structure, use, and diseases of the great sympathetic; an excellent analysis of which work is given in the February and March numbers of our respected cotemporary, the Medical and Physical Journal. From the pathological portion we shall make some extracts.

Among the diseases connected with, or dependent on, morbid conditions of the great sympathetic, Professor L. ranks hypochondriasis, hysteria, melancholia, mania, angina pectoris, asthma, &c. Primary disorder of the ganglionic system will also induce, sympathetically, hemicrania, tinnitus aurium, and various other affections. We shall now extract a few cases where dissection came to the aid of observation during life.

Case 1. A female had suffered from spasmodic and hypochondriacal symptoms from the age of puberty, and had had two incomplete apoplectic seizures, with slight subsequent paralysis. She got married, and became pregnant. In the 8th week of utero-gestation a most obstinate and severe gastric irritability came on, in consequence of which she could keep no food whatever on her stomach for the ensuing three months, at the end of which she died. The internal fauces and mouth became inflamed, and ultimately mortified, from the constant vomiting. But the most distressing symptom was a burning pain along the course of the spine, and in the lower part of the right hypochondrium, producing continual jactitation, exhausting the patient's strength. The lady died at the end of the fifth month of pregnancy—not having received any relief from medicine. An attempt was made to produce abortion, but failed.

Dissection. The brain was sound, as were also the thoracic viscera. The stomach presented no morbid appearance, although there had been black vomiting. No disease could be discovered in the intestines nor in the uterine system, except some fibrous tumours in the substance of the womb, the size of walnuts. The fœtus was healthy, and in its natural position. The viscera were all removed, and the semilunar ganglia cut out. "It was not, indeed, converted into a foreign substance, but its colour was intensely red, which was regarded as true and genuine inflammation, by some men of experience and great cultivators of anatomy, to whom I communicated this observation. The inflammation was so obstinate, that the ganglia were but little paler after three days' infusion in cold water; and I took care to have the right ganglion drawn in this state, and represented in the seventh plate of this treatise. Its upper part is of a vivid red; but the inferior, from whence the mesenteric branches go off, is more livid. The splanchnic nerve appeared to me much broader than usual before its entry into the ganglion." The author conjectures that this inflammation had been long present, in a chronic form, giving rise to the hypochondriacal affections above alluded to. To this inflammation he also attributes the burning pain along the spine. The spinal chord does not appear to have been examined.

Case 2. The body of a girl was examined, who had been attacked with epidemic cough, which was converted by metastasis, first into spasmodic vomiting, and then into convulsions that could not be overcome by any remedial agents. In this case the left portion of the solar plexus was inflamed. The part was steeped for some days in water, at the end of which the redness had passed into a yellowish tinge, confined to the portion supposed to be inflamed.

5. *Cardiac Disease.** Desjardins, 22 years of age, of feeble constitution, had been, for a good while, affected with shortness of breath, especially if he attempted to run. In the middle of July 1821, he was suddenly seized, without apparent cause, with pains in his limbs and dry cough. Next month the glands of his neck swelled considerably—the cough continued; but he pursued his avocations till the 25th of September, when he presented himself at the HOTEL DIEU, with the following symptoms:—pallid countenance—lips puffed and bluish—cough troublesome—expectoration mucous and ropy—breathing very short, difficult, and almost impossible in the recumbent posture; he

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* M. Breschet. Archives Generales, Dec. 1823.

was therefore obliged to be always sitting up in bed, the body bending forward, and enjoying very little sleep. On percussion, the whole of the chest, but particularly the front of it, emitted a dull sound. He could take in but a very limited portion of air at each inspiration. The pulse was small and quick—the action of the heart imperceptible—heat of skin natural—no distinct pain in the chest. Twenty leeches were applied to the right side of the thorax. On the 18th the same number were again applied. On the 22d the same symptoms continued—two blisters in succession. The following days presented some amelioration of the symptoms, inasmuch as the patient could lie lower down in bed. 5th November, symptoms as bad as ever. Seton introduced in the left side of the chest. A considerable hæmorrhage resulted, and continued 24 hours. On the sixth and eighth a nasal hæmorrhage took place, requiring the plugging of the nostrils. He died on the 13th of the same month.

Dissection. In the left cavity of the chest about six or eight ounces of sero-sanguineous effusion—pleura costalis et pulmonalis opake—thickened—and very much injected—recent adhesions on the right side between the lung and diaphragm, with red granulations on the diaphragmatic pleura—both lungs gorged at their lower parts. The pericardium was enormously enlarged, and thickened in its structure to an inch or an inch and a half in some places, resembling the substance of the uterus, and in some parts like cartilage. The heart was rather larger than natural.

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6. *Gangrene of the Heart*. This is a very rare disease. Our able and indefatigable friend, Dr. Kennedy of Glasgow, has published a brief but instructive memoir on this subject, in the April number of the Medical Repository. The case which gave origin to this memoir was a woman little past the prime of life, and who, in July 1823, came under Dr. K.'s care for apparently uterine disease of some two or three years' standing. She suffered from obstinate constipation, strangury, offensive uterine discharge, tendency to fainting, pain in the head, and what was most particular, "an excessive morbid perspiration, which wasted her strength, depressed her intellectual energies, and superinduced despondency." This perspiration was offensive, and not unfrequently manifested a peculiar nature. About the lumbar and dorsal regions, it often imparted to her undress a pale sanguine tinge, and this appearance was always followed by a sense of profound exhaustion and irregular nervous agitations. By a judicious course of medicine, calculated to improve the state of the digestive organs and recruit the general health, this patient, in a few months, became greatly amended in all respects, when, on the 4th November of the above mentioned year, she exposed herself without due consideration, to cold, wet clothes, and immoderate fatigue. This was followed (on the 6th) by sharp pains through all parts of her body, and an intense rigour, succeeded by great exhaustion and restlessness. 8th at noon, Mr. Thompson (by Dr. Kennedy's desire) abstracted about 20 ounces of blood from her arm, and exhibited purgatives and anti-

monials. By these means the thoracic symptoms were relieved, but an acute pain arose in the region of the liver, to which a large blister was applied, without effect of any kind. In the evening an exacerbation of all the symptoms. The blood was inflamed. It was not till the 10th that Dr. Kennedy himself saw the patient. He prescribed another venesection, and an aperient lavement. The quantity of blood obtained was trifling; but the enema brought away three dark and offensive motions, without any mitigation of the symptoms. 11th, Dr. Kennedy and Mr. Thompson met in consultation, and perceived the rapid wane of their patient's living powers. In an hour afterward she expired. The history of the symptoms is not at all detailed as the case went on, but Dr. K. gives the following particulars after the patient's death.

"Her pulses, at first small, hard, irregular, rapid, afterward became feeble and less frequent, and intermittent: long before death, they disappeared altogether from the wrists. Syncopal tendencies often recurred, but never terminated in fainting. A sensation of burning heat pervaded all the regions of her chest; in the left it was excruciating. During the last four days of her life, the patient suffered much from stinging pains, which first occupied her extremities, then pervaded the shoulders and line of the vertebral column, then seized the left thoracic department, and, after the last bleeding, went, to be immoveably fixed, in the right hypochondriac region. She had catchings in the chest and orthopnœal breathing.

"At an early period, cardiac palpitations supervened, and gradually acquired frequency as well as strength. As the disease advanced, however, and the powers of the heart began to yield, its actions became very intermissive and troubled. All the extremities, superior and inferior, suffered progressive tumefaction from the diffusion of extravasated lymph. The left arm and limb, in particular, were distended almost to bursting: their joints, at first nearly inflexible, could not, during the three days which preceded her dissolution, be moved without occasioning exquisite pain. Broad livid patches, in some places, disfigured their surfaces; on others, were large sphacelated wheals. At the same time, she was altogether so impotent as to be incapable of changing, in any degree, her position, without assistance. Many hours before her demise, she fell into a state of comatose abstraction which uninterruptedly increased, till the last of her vital forces irreparably failed." 279.

Dissection, 8 hours post mortem. Some black patches on the omentum—mesenteric vessels much distended—many spots of inflammation and others of gangrene on the intestines. Uterus twice its natural size—external surface of the fundus soft and livid. Liver of a dark colour, but not disorganized in substance. In the thorax twenty ounces of turbid serum were found—and four ounces of a similar fluid in the pericardium, on the internal surface of which was much vascular network of a dark colour.

"All parts of the heart, external and internal, exhibited distinct marks of having been the seat of gangrenous inflammation. They were preternaturally flaccid, and dark in colour as the darkest coagulated venous blood: they could be easily perforated in every direction with the finger. When thus torn, they exhaled a putrid odour; but no blood exuded from their ruptured vessels. The left ventricle in particular, was quite livid, and destitute of its muscular tenacity; it was little firmer than cerebral structure. When lacerated, it threw out a most offensive odour, not different from what is generated by putrescent animal substance. All the cavities of the heart were empty; but the large veins, especially the abdominal, were loaded with grumous blood." 280.

Though heavily loaded with blood, the lungs appeared healthy. "Patches of morbid structure, unequal in size, and discoloured to various shades of darkness had formed on different parts of the surface of the body—some of them putrescent, others putrid."

It appears from the dissection, that a remarkable tendency to gangrene existed not merely in the heart, but in various other organs and structures of the body of this female. For various interesting comments we must refer to the original paper in the Repository.

7. *Scirrhous Pylorus.* Dr. Abercrombie has favoured the profession with some cases of, and observations on, disease of the pylorus. This affection is, of course, beyond the reach of medicine. It is often obscure in its symptoms, but generally accompanied by dyspepsia, obtuse pain especially after eating—sometimes acute and violent attacks of pain and vomiting, with considerable intervals of ease. These intervals often deceive practitioners, inducing them to believe that no serious organic affection can be present in a viscus like the stomach, with days and weeks of ease and apparent integrity of functions. We lately attended a patient, who had been affected with scirrhous pylorus for years, and yet the paroxysms of pain seldom at first lasted more than one, two, or three days, attended with vomiting, after which an interval of from two weeks to two or three months would succeed, during which, digestion went on well, and the system would recruit from the effects of the preceding attack. In progress of time the paroxysms became more violent, the intervals of ease shorter, and the recovery less perfect. Emaciation ultimately advanced, and the patient died, worn out with pain, and deprived of nutrition. The following case recorded by Dr. Abercrombie forms an appropriate illustration.

"A gentleman, aged 30, was for several years liable to paroxysms of pain in the stomach. The pain usually continued for several hours, and went off with vomiting, and it returned at uncertain intervals, frequently of many weeks. Upon several occasions, he appeared to have got entirely free from it. He was in other respects in good health, except being considerably troubled with hæmorrhoids, until about a year before his death when he was suddenly seized with copious vomiting of blood. This soon went off, and in a few days he was in his usual health; but from this time his former complaints rather increased. The attacks of pain, followed by vomiting, were more frequent, and he was again several times attacked with vomiting of blood, but still he had considerable intervals of health; no hardness could be discovered by examination, and that uniformity of symptoms was entirely wanting which usually accompanies organic disease. His death was rather unexpected. After having complained for two days of pain in his stomach in the usual form, he was found, in the morning of the third day, exhausted and without pulse, and died in a few hours. Three days before his death, he had been able to walk out a good deal, and made no particular complaint.

Dissection.—The pylorus was surrounded by a mass of scirrhus, the size of an orange, very firm, nearly cartilaginous. Among the intestines there were extensive adhesions. The body of the stomach, the liver, spleen, and pancreas, were healthy. There was some ossification of the valves on the right side of the heart, and the right auricle was remarkably distended with coagulated blood. The lungs were healthy." 244.

Dr. A. relates another case still more remarkable, from its progress, and the absence of all the symptoms which usually are looked for in organic diseases of the pylorus.

Case. A man aged 40, came under Dr. A.'s care in December 1817, weakened and emaciated, with pulse 120, but without any other complaint. No pain, no cough—appetite good, bowels natural, gastric functions healthy. A hardness was felt about half way between the ensiform cartilage and the umbilicus, painful on pressure. He had been ill 18 months, the affection having commenced with vomiting, which recurred five or six times a day. This state continued five or six months, and then ceased entirely. During the last twelve months he complained of nothing but debility and emaciation. He died completely exhausted, and without any other symptom supervening except violent fits of pain in the abdomen. There was no vomiting, and the appetite was tolerably good till the last. On dissection, a large mass of scirrhus, four or five inches in extent, surrounded the pylorus; and the pyloric orifice was so narrow as scarcely to admit the point of a very small finger. The inside of the mass opened upon the inner surface of the stomach, by an ulcerated surface, covered with large cancer-looking tubercles. The rest of the stomach was sound.

There is perhaps no other organ in the body where disease will arrive at a greater height with fewer symptoms than the stomach—notwithstanding the delicacy and importance of the viscus. The reader will remember the case of Napoleon Buonaparte as a memorable example.

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8. *Post-mortem Appearances in Hooping Cough.* Dr. Webster has drawn the attention of the profession, as our readers know, to the pathology of hooping-cough, which he seems to consider as kept up, if not caused, by vascular turgescence in the head. The only fatal case of the disease which has lately happened in our author's practice was examined by him after death. The child was only nine months old, and had had the disease one month before it proved fatal. When first seen by Dr. Webster, in the middle of the above period, the child ap-

peared to suffer greatly in the head, in addition to the hooping-cough, which recurred every five or ten minutes. The eyes were red and heavy, the head hot, the pulse quick, the constitutional fever considerable. Leeches to the head, and aperients gave temporary relief; but in 14 days from admission, "the patient died, having *every symptom of hydrocephalus*, with occasional fits of hooping, but not so severe as at first."

Here it is evident that the child did not die of hooping-cough, and therefore we could not reasonably expect the same appearances in the chest which present themselves in fatal cases of that disease. The external aspect of the lungs was healthy—they were crepitous throughout —neither was there any disease on the mucous lining of the air-passages, except at the bifurcation of the trachea, where there was a slight blush of redness and some frothy mucus. In the membranes of the brain there was great vascularity, and a good deal of serous fluid effused between them. In the ventricles about two ounces of serum were found, and their arachnoid lining was injected with blood-vessels.

In the above case the symptoms and dissection prove that death was caused by the cerebral disease, but whether that disease was a mere coincidence or consequence of the hooping-cough, is not proved. Allowing, what is very probable, that the cerebral affection was caused by the interrupted return of blood from the head, in consequence of the cough. There is nothing in this case to support the idea that the cause of hooping-cough is in the head. To the treatment recommended by Dr. Webster, and employed by him with so much success, we do not object, but, on the contrary, highly approve. This consisted in the application of leeches to the forehead and behind the ears, blisters, and occasional purgatives. It is clear that this treatment guards the brain from congestion, so liable to take place in most diseases of children. The hooping-cough itself will generally do well, under any common antiphlogistic methodus medendi.

9. *Cases of Disease of the Heart, from Contraction of the left Auriculo-Ventricular Opening.* By M. Bouillard, M. D.*

The science of diagnosis has made great progress within the present century; and in no diseases more than in those of the heart. "Thanks," says Dr. B. "to the important instrument discovered by Laennec—thanks to auscultation, mediate or immediate, any student, who has studied the use of the stethoscope, can now recognise by easy and certain signs, the narrowings (retrecissemens) of the auriculo-ventricular openings of the heart." These contractions derange, of course, the valvular apparatus placed between the chambers of the organ, and give rise to the most serious diseases. It is found by experience, that the *left* auriculo-ventricular opening and the aortic opening are much more frequently affected by induration and contraction than the *right* auriculo-ventricular opening; the reason of which is not satisfactorily accounted for by the difference between arterial and venous blood circulating through them.

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* Archives Generales, September 1823.

Corvisart's work furnishes us with no positive signs by which we can ascertain contraction of the *right* auriculo-ventricular opening—because, says he, we have no means of feeling the pulmonary artery. There is, however, he observes, a peculiar murmuring noise in the chest, in these cases, which it is very difficult to describe. The pulse is not so irregular as in auriculo-ventricular contractions of the *left* side. It is in contraction of the aortic orifice and induration of the semilunar valves that the pulse is remarkably affected. "The pulse, in this last case," says he, "may still preserve some degree of hardness, but is never either full or regular. This permanent irregularity of pulse is a sure diagnostic sign of contraction of the aortic opening." It is by mediate or immediate auscultation, however, as laid down in the admirable work of Laennec, that we are to form our diagnosis in these diseases. We think every physician should possess himself of, and carefully study the work alluded to—it is one of infinite importance in the diagnostic, and consequently prognostic branches of our science.

Case 1. Lebaut, 68 years of age, a robust female, but with ill-formed chest, entered the hospital COCHIN, on the 4th November 1822. She reported that she had been in the habit of *vomiting* blood for five years past. During the last three years she had laboured under symptoms of aneurism of the heart. Carefully examined, she presented the following phenomena:—cough—sense of constriction in the middle of the chest—palpitation—orthopnœa—fear of suffocation—violet hue of countenance lips swelled—pulsation of the jugular veins—pulse irregular, unequal, intermittent, frequent, and small—pulsation in the region of the heart strong. When the stethoscope or naked ear was applied to the chest, the ventricular contractions were found to be intermittent and irregular—the intermissions, in general, being preceded by two quick contractions of the ventricle. The contraction of the left ventricle was accompanied by a strong impulsion, and peculiar noise or susurrus. The hand applied to the region of the heart felt a vibratory tremor, deep-seated but very distinct. The lower extremities were œdematous. *Diagnosis* recorded on the books was, *contraction of the left auriculo-ventricular opening—hypertrophy and dilatation of the left ventricle.* She died eleven days after entrance into the hospital.

Dissection. The heart enormously distended, with clots of blood, and nearly three times its natural size. The left ventricle was dilated, and its parietes about an inch in thickness towards the base of the heart. The carneæ columnæ of the mitral valve were very strong. The right ventricle was a little thicker in its parietes than natural, but not sensibly dilated. The two auricles were dilated, and thickened in their parietes at the same time—the left being much more so than the right. The substance of the heart was firm and red. The mitral valve was disfigured, hard, and fibro-cartilaginous. The left auriculo-ventricular orifice was so contracted that the point of the little finger could hardly be pushed through it. The tricuspid valve was deformed also, but the right auriculo-ventricular orifice was very large, and could not be closed by the valve. The pericardium reflected over the heart, presented a white patch of false membrane, and a number of small warty excrescences. The semilunar aortic valves were thickened, but the orifice of the aorta was not sensibly contracted. We need not enumerate the appearances in the other parts of the body, as the patient evidently died of disease of the heart.

Case 2. Louisa Newray, aged 33 years, had not menstruated during the last six months, and being affected with much embarrassment about the chest, she determined to enter the hospital, on the 22d of September, 1822. Reported, that eight years previously she experienced a fall on the præcordial region, since which she had palpitations, orthopnœa, and spitting of blood. She was under the care of Professor Pelleton, in the Hotel Dieu, and by repeated small bleedings and low regimen her condition was so much improved, that she left the hospital at the end of five months in tolerable health, excepting that she experienced, from time to time, especially on taking any exercise, palpitations, and sometimes orthopnœa. When received into the Cochin, she presented the following phenomena ;—palpitations very strong—and stronger to her own feelings towards the right than towards the left præcordial region—paleness of countenance—air of suffering and anxiety—protuberance of eye, and expression of fear there—lips vermillioned—oppression, orthopnœa, cough, sanguineous expectoration, wheezing respiration, small, hard, and quick pulse, but regular. The cardiac pulsations could be felt by the hand to a considerable distance around the point where the organ usually beats. These pulsations were much more apparent in the situation of the right, than of the left ventricle.

Auscultation. The pulsations of the right ventricle are accompanied by a strong impulsion, and resemble the strokes of a hammer—they are heard in the posterior part of the chest. The beating of the left ventricle presents nothing extraordinary—pulmonary rattling very sonorous.

Diagnosis. Aneurismal hypertrophy of the right ventricle—contraction of the left auriculo-ventricular orifice—bronchial catarrh.

By bleedings, quietude, and diluents, the patient so far recovered as to be able to leave the hospital in a month ; but, as might be expected, she returned again in six weeks, worse than ever. She had now discharges of blood from the lungs, constant sense of suffocation—inability to lie down—sleep interrupted by frightful dreams and startings—in short, the situation of this poor woman was dreadful. The pulsations of the right ventricle could be felt in every part of the thorax—even by the hand quite back near the spine. The pulse was small, but perfectly regular. She lingered out a wretched existence of better than a month after her second entry into the hospital, and then expired suddenly.

Dissection. Considerable dropsical effusion into the cellular membrane of the lower extremities, but very little in the bags of the pleura—lungs voluminous and crepitous—lining membrane of the bronchia red—heart full of clots of blood and of enormous volume—when these clots were removed, it was still considerably larger than natural—the cavity of the right ventricle much dilated, and its parietes about half an inch in thickness, being of a red colour, and denser than natural—orifice of the auriculo-ventricular communication natural—right auricle dilated in proportion to the ventricle; its parietes thicker and more fleshy than natural—left ventricle natural, and its parietes about the same thickness as those of the right chamber—the mitral valve thickened and indurated —the auricula-ventricular opening in the left side contracted and eliptical, so as scarcely to admit the point of the little finger.

Case 3. Mary Simon, aged 47 years, had ceased to menstruate five years. She entered the hospital Cochin on the 21st of February, 1822. She had experienced much domestic affliction and chagrin. In 1813 she began to perceive that her hands and face were changing to a violet colour, that her lower extremities swelled, and that she had palpitation and dyspnœa on the least exertion. These symptoms were relieved at the time by aperients and diuretics; but some degree of palpitation continued. In 1817, the increase of the above-mentioned symptoms, together with the addition of hæmoptysis, forced her to enter the Hotel Dieu, where she was under the able care of M. Recamier. After this she had been in the Cochin Hospital, and received temporary relief; but still the symptoms continued, aggravated at intervals. When she came under the care of the reporter in the Hospital Cochin, for the last time, she had hæmoptysis—livor of countenance and skin of the extremities—pulse hurried, irregular, intermittent, very small, contrasting greatly with the violent palpitation in the region of the heart, which raised the sternum at each shock—pain in the left side of the chest,—great sense of suffocation.

Auscultation. The pulsations of the heart were so violent and tumultuous that an analysis of them was very difficult. Those of the left ventricle communicated to the stethoscope a strong impulsion, and were moderately sonorous—in the region of the right ventricle there was heard a hissing noise—mucous rattling in the bronchia very distinct in the anterior part of the chest—*pectoriloquism* distinct under the right scapula.

Diagnostic. Contraction of one of the orifices in the left side of the heart with hypertrophy—tubercles in the lungs with excavations. Died on the sixth day after entering the hospital.

Dissection. Adhesions of the pleura very general—a portion of the left lung tuberculous—upper portion of right lung tuberculated and excavated—the rest of the lung sound—heart nearly double its natural size, and pushed high up in the chest by the abdominal organs—*left* ventricle voluminous, its parietes about an inch in thickness, but its cavity not much increased in dimensions—left auricle rather thickened in its parietes, and the carneæ columnæ of *its* appendix so large that they resembled those of the ventricles—left auriculo-ventricular orifice contracted greatly—bicus (mitral) valve indurated and deformed—the *right* auricle and ventricle filled with blood, but not beyond the medium size—the ventriculo-aortic orifice was puckered and contracted in consequence of three roundish tubercles growing from the three semilunar valves—some cartilaginous patches on the inner membrane of the aorta. In the abdomen, it was remarked that the organs were somewhat large, but very much encroaching on the thorax, being pushed up there apparently by the strong action of the abdominal muscles.

Case 4. Ellen Lemindre, 34 years of age, having experienced much domestic trouble, began to feel some symptoms indicative of disease of the heart in the course of the year 1820. In the year 1821 she spit up some blood—she had considerable oppression in the chest, with palpitation after the least exercise. She entered the COCHIN on the 7th of February, 1822, presenting the following phenomena—suppression of the menses for two months—face swelled, but not livid—œdema of the lower extremities—pain in the chest, especially in the præcordial region—sense of oppression there on making the least effort—slight orthopnœa—frequent cough—muco-sanguineous expectoration.

Auscultation. Applied over the left ventricle, the cylinder conveyed a very remarkable susurrus to the ear—the ventricular contractions very strong, while the pulse was very small but hard—the susurrus preceded the ventricular contractions, and consequently took place during the action of the left auricle—the region of the right ventricle and auricle presented nothing extraordinary—the *râle* (noise of air passing through mucus in the lungs) sufficiently audible.

Diagnosis. Contraction of the *left* auriculo-ventricular orifice, with hypertrophy of the left ventrical—pulmonary catarrh. The patient got a little better by repose, low living, and depletion; but was seized with erysipelas of the face and neck, which, with the original disease, put an end to her existence about three weeks after her entrance into the hospital.

Dissection. The lungs crepitous throughout, but the mucous membrane of the bronchia was red and inflamed—the heart was much larger than natural, and filled with blood in clots—parietes of the left ventricle full an inch in thickness, and its cavity rather diminished—left auricle dilated and thickened in its parietes—the left auriculo-ventricular orifice greatly contracted and puckered, so as to be only a few lines in diameter—the mitral valve misshapen, and of a fibro-cartilaginous hardness. Some deviations from natural structure in the right side of the heart, but not of material consequence.

A pretty general opinion prevails among medical men, especially of the old school, that all assistance from auscultation in diagnosis of cardiac diseases, is useless or unnecessary, as the general symptoms are quite sufficient indications of the nature of the malady. They are no such thing. These practitioners, if taken to a patient labouring under organic disease of the heart, will give a pretty good guess that the organ in question is diseased—but, if you ask them what is the *kind of lesion*, they *shake* their heads, and tell you it is impossible to ascertain that point. Thus, then, they can form no *diagnosis* at all, and consequently the *prognosis* is a mere hap-hazard guess, which, fortunately for their reputation, generally turns out right in the end, because all diseases of the heart are dangerous, and most of them fatal. But there is great diversity in the organic lesions of this viscus, requiring considerable modification of treatment, and consequently requiring accurate diagnosis, if it can possibly be attained. On this account we should not disdain any help which auscultation (mediate or immediate) can afford. Functional diseases of this organ are very apt to imitate very perfectly the phenomena of organic diseases—and here the practitioner who trusts solely to general symptoms, is almost always wrong, both in diagnosis and prognosis, to the great danger of his professional character, in these days of scrutiny and investigation prevalent among the rising generation of the profession. We seriously warn those, who think themselves very comfortably fortified in the old routine of experience, to bestir themselves in the task of keeping pace with the progress of knowledge. We have much to learn, as well as to unlearn.

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10. *Neuralgia.* Dr. R. Evans has related two cases of neuralgia cured by carbonate of iron, in the last number of our respected northern cotemporary. The first was that of a gentleman who had been troubled for many years with a pulsating sensation in the base of the brain, which was ascribed by his medical attendants to an aneurismal or other organic affection. This continues, without disturbing his health. But the neuralgia was seated in the branches or twigs of the ophthalmic branch of the fifth pair of nerves of the right side, occupying, at first, a circular spot the size of a dollar, and about 2½ inches above the supra-orbital foramen. The pain was not constant during the day, but was always excited by the most trivial touch of the finger or other external agent—even a slight current of air. The paroxysms became so violent, at last, that he could scarcely take food. When quiet in bed the pain went off. This state had continued 18 months. Opium and other narcotics were used without success, and the digestive organs were *Abernethianized* without any benefit to the local complaint. Under the exhibition of cinchona rubra, the seat of the pain shifted to the temple, but there it was as troublesome as before. Leeches dislodged the pain from this part, and it fixed itself in the trunk of the nerve as it leaves the supra-orbital foramen. After various remedies had been tried in vain, the carbonate of iron was exhibited in doses of one drachm thrice a day. In a few days Dr. Evans was surprised to find the disease nearly cured. The medicine was continued for some time longer, attending to the state of the patient's bowels, when the cure was completed.

The second case was that of a female, aged 45 years, who had been afflicted with neuralgia of the superior maxillary nerve (affecting all the teeth supplied by it, and the side of the nose) for the space of three years, the disease occurring in paroxysms, with very short intervals. She could only take food in a liquid form, and got very little sleep. She was put on a course of carbonate of iron (half a drachm thrice a day) and in between two and three weeks she was perfectly well.

Immediately succeeding Dr. Evans's cases, is one from Dr. Borthwick of Edinburgh. This was a man, aged 46, who had had a rheumatic affection of the right hip the preceding year, of short duration. Soon afterward he was seized with a severe pain in the left side of the face, coming on in paroxysms which generally ended in a pain in one of the teeth of that side. Various remedies were tried in the country, and some of the teeth were extracted, without benefit. He came up to Edinburgh, and, in consultation with Dr. George Wood, it was determined on to give the carbonate of iron, commencing with half drachm doses thrice a day, keeping the bowels open with gentle medicines. In five or six days the disease was subdued, and the patient continued well afterward.

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10. *Inoculation of Syphilis.* The new physiological doctrine of Broussais admits not the existence of specific poisons, specific diseases, or specific remedies—and why?—because they cannot be explained on the new principles!—To prove their non-existence, three young Parisian students inoculated themselves with the matter of a venereal chancre, in the month of November last. In one, a swelling of the axillary glands followed the introduction of the virus, and terminated in suppuration, with considerable loss of parts. The second exhibited several unequivocal symptoms of syphilitic infection. In the third, the puncture inflamed and ulcerated—a chancre, displaying the regular syphilitic character, appeared, and was treated by antiphlogistics, the young sceptic carefully abstaining from all mercurial preparations. The ulceration made fearful progress, but the youth obstinately refused to take the *specific*. At length, he consulted one of the professors of the *Faculte de Medecine*, who pronounced the ulcer to be syphilitic, and incurable without mercury. The young man, on hearing this sentence, returned to the hospital, and preferring death to a retraction of his preconceived opinion, cut the crural artery and died on the spot!

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12. *Memoir on the Pathological Anatomy of the Peritoneum.* By M. Scoutteten, M.D. attached to the Military Hospital of Toulouse.

[Archives Generales, December, and February.]

Immediately after inflammations of the mucous surfaces come (in point of frequency) phlogoses of the serous membranes. These last too are more dangerous than the former. Schenck, Bonetus, and Morgagni thought that peritoneal inflammation was always *consequent* on inflammation of some other parts—and this has been maintained even by M. Portal. There are few, in the present day, however, who will deny that the peritoneum may be *alone* inflamed—and that very frequently. The writings of Broussais, Laennec, Gasc, Jennesse, and others, in France, together with the various works on puerperal fever in this country, have thrown great light on the disease in question, and rendered the pathology pretty familiar to most of the observant part of the profession; but there is a great deal yet to be learnt respecting the chronic forms especially of peritonitis.

Our author divides his subject into three heads, 1$^{mo.}$ Those alterations of structure in the peritoneum dependent on inflammation—2$^{ndo.}$ Those structural changes which do *not* depend on inflammation—and 3$^{tio.}$ Foreign bodies in the cavity of the peritoneum.

1. *Peritonitis Acuta.* Our author thinks, and with justice, that it is needless to give various names to peritonitis, according to the portion of peritoneum which is inflamed, as omentitis, mesenteritis, &c. It is important, no doubt, to ascertain as nearly as possible, in what portion of the membrane the focus of inflammation is placed—merely that the external means of relief may be there applied—but to give names to these is worse than useless.

When irritation has been determined to the peritoneal membrane, and there produced the mildest shade of inflammation, we observe small red spots, not more than a line in diameter, separated from each other, and, on minute examination, appearing to be clusters of puncta crowded close together. Between these red spots, the peritoneum, when viewed with a good magnifying glass, presents portions of its surface of a natural colour. The appearance now described is rarely to be seen in man, for obvious reasons; but it may be readily produced in animals, as dogs, by injecting an irritating fluid into the cavity of the peritoneum. Thus, if bile be thrown in and the wound closed, the above appearances will be strikingly produced in 24 hours.

It has been remarked by several accurate observers, that all the symptoms of peritoneal inflammation have been present during life, and yet on dissection no trace of it could be found on that membrane. On this point our author professes to be sceptical. But we think there can be no reason to doubt that mere injection of vessels, or the first stage of inflammation, where the structure of the tissue is not altered, may disappear in the interval between death and dissection. Indeed, our author's own experiments give the greatest support to this opinion. Into the peritoneal cavities of dogs he injected bile, and at the end of 24 hours examined the abdomen, when inflammation was unequivocal. The animal was then immediately killed by pithing, and an evident diminution of the inflammation took place with death. As the dogs got cold, the diminution was still greater. These experiments were repeated many times, and always with the same result. It is therefore highly probable, if not quite certain, that the first stage of peritoneal inflammation, in some particular constitutions, may produce such disturbance in the vital functions as to destroy life—and that the collapse after death may dissipate the redness and other marks of phlogosis which existed anterior to that event.

In the early stages of inflammation, our author found by experiment, that the surface of the peritoneum, though apparently dry and glistening, was, when touched with the finger, covered with an unctuous and viscid exudation. Sometimes instead of the red spots above described, this first shade of phlogosis presented merely a developement of red vessels running in lines to a greater or less extent.

In the progress of the inflammation the red spots become more extended and close together, ultimately so blended as to appear one homogeneous patch, of a scarlet colour. Still, at this period, the distended vessels are visible, but the peritoneal tissue does not appear to be thickened. It has, however, by this time, lost its transparency. When the phlogosis is still more advanced, the redness becomes more intense and extended, sometimes occupying the whôle peritoneal expansion; at others, bounded to the forms of bands or stripes traversing various portions of intestine, or only occupying the space where the intestines adhere to each other. The intense red colour, at this period, is not wholly owing to the injection of vessels, but to a sanguineous exudation which is diffused over the peritoneal surface adhering very tenaceously to it, and presenting a villous appearance. Even in this stage, the peritoneum will sometimes appear dry and shining; but more commonly we now find an effusion of a whitish fluid into the abdominal cavity.

Such an acute inflammation of the abdomen can only last, our author thinks, a few days—three or four, without death or a change for the better. The abdominal pain is generally very acute—the patient drawing up the thighs, or bending the body forwards to relax the abdominal muscles. Sometimes the pain is bounded to a single point, and then we generally find the inflammation also bounded to the same spot. On the 3d September last, our author opened a man who had felt acute pain in the right iliac region for two days prior to his death. He found, on dissection, the marks of intense inflammation of the peritoneum bounded to the appendix cæci. At times, the peritoneum covering the bladder will be the seat of phlogosis, and then the evacuation of the urine will be almost uniformly suspended, and the pain felt in the pelvis. The peritoneum covering the inferior surface of the diaphragm may be the sole seat of inflammation, and then we have almost constant hiccup. A soldier in the *Val de Grace* hospital experienced, for some days, an intense gastro-enteritis, which began to give way to the usual means, when all at once a violent pain was experienced (augmented by pressure) in the direction of the diaphragm, accompanied by constant hiccup, shrinking of the features, drawing up of the legs and thighs. These symptoms could not be controlled, and he sunk in two days. M. Broussais prognosticated the existence of sub-diaphragmatic inflammation of the peritoneum, which was completely verified by dissection.

In acute inflammations of the peritoneum, we have this membrane sometimes of a purple or even black colour, with strong adhesions of the folds of intestines together, without the intervention of a false membrane, which at other times, is occasionally, indeed often, seen. Actual gangrene of this membrane has been found after death; but this is of rare oocurrence.

Another phenomenon of still rarer occurrence presented itself to our author in the year 1822, in the body of a man who had died of acute peritonitis. This was a subperitoneal emphysema. The whole sheet of this membrane was equally elevated by gas, which could be pressed from place to place, and made to accumulate in particular positions. In another case he found the same phenomenon, but on a much more limited scale, the emphysema being bounded to the peritoneum lining the diaphragm and covering the liver. In neither of these instances was there any sign of putrefaction to account for the coalition of gas.

Between the laminæ of peritoneum forming the mesentery, we sometimes find collections of purulent matter, in peritoneal inflammation. This, however, is not of frequent occurrence.

When peritoneal inflammation is extended to 20, 25, or 30 days, false membranes of albuminous matter are found gluing the convolutions of the intestines together, and even these last to the peritoneum lining the abdominal parietes.

During the first few hours of acute peritonitis there is very little effusion of fluid beyond the usual halitus; but, after the inflammation has lasted 36 or 40 hours, there will be an evident effusion, generally of a whitish or milky appearance. Blood itself has been found extravasated in acute peritonitis—but this is a rare phenomenon. The quantity of effusion varies from a few ounces to some pints. Sometimes it is nearly as limpid as water and containing no albuminous flocculi—in other cases, it is thick, and resembling diluted pus of a very peculiar odour, which can never be forgotten by those whose hands have been imbued in it.

II. *Alterations of Structure observed after Chronic Inflammation of the Peritoneum.* Chronic is often the consequence of acute peritonitis; but it also not unfrequently creeps on in a slow and almost insensible manner, without any violent symptom. This last may be properly termed "primitive chronic peritonitis."

Chronic after Acute Peritonitis. On opening the body of a person who has had peritonitis for 50 or 60 days, we shall find the abdomen containing a greater or lesser quantity of a whitish fluid—a number of false membranes gluing the intestines together, or forming sacs which contain fluids of different appearances. When these false membranes are detached from the peritoneum we shall find that structure less red than in acute peronitis; sometimes indeed scarcely coloured. In these cases the effused fluid is rarely in such quantity as to sensibly distend the parietes of the abdomen. In some cases, however, a considerable quantity of limpid yellow serum will be found, without any trace of false membranes, but with the peritoneum thickened, reddish, and highly injected—or the great omentum thickened, red, fleshy, or presenting hydatiform bodies. These two shades of peritonitis are not attended with much pain, and bear abdominal compression without much inconvenience. The patients only complain of a sense of weight, and they are much harassed with constipation of the bowels. When chronic peritonitis has lasted many months, in certain constitutions, we find, besides numerous adhesions and false membranes, a developement of tubercles, of different sizes, and various degrees of consistency.

Instead of the serous, or puriform fluids which we generally find after peritoneal inflammations, there is sometimes, though rarely, an extravasation of sanguinolent, or even pure sanguineous fluid, resulting from rupture of vessels.

Of ulceration, gangrene, and scirrhus of the peritoneum, we shall not speak ; as they are extremely rare in their occurrence.

The above are the general appearances presented after inflammation, acute and chronic, of this important membrane, and the practitioner should bear them in mind when he is prosecuting his post mortem researches.

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13. *Angina Pectoris.* Dr. Michael Ryan has published a case of (supposed) angina pectoris cured by prussic acid. We shall state the case before we offer our comments upon it.

Mary Lalor, ætat. 21, thin and delicate, applied to our author on the 8th July 1823, on account of pain under the left mamma, suddenly shooting across to the sternum, on the slightest exertion, and inducing a distressing sense of suffocation threatening instant death, and obliging her to stop. She had also a dull pain in the left shoulder extending to the middle of the arm, and sometimes to the fingers. Palpitations were troublesome, especially on ascending an eminence. These symptoms were of three years duration—"*were mostly present every day,*" and latterly had been attended with *dyspepsy.* The urine was scanty and the ankles œdematous—pulse 120, small and regular. Leeches and blisters had been previously applied, and many internal medicines exhibited, with only temporary advantage. The dyspepsia was relieved by the ordinary remedies, but the pain in the side and sternum remained. Dr. Ryan applied the tartar emetic ointment, and exhibited a mixture composed of digitalis, colchicum, and prussic acid. By these remedies she was soon entirely cured.

Dr. Ryan has little hesitation "in asserting that the affection of the heart was idiopathic, and what is called *angina pectoris;* while that of the stomach was only symptomatic of the former." A little farther on he observes, that "angina pectoris is an *organic* disease of the coronary arteries of the heart, inducing a deficiency of nutriment in its parietes." Very well. On what principle did he administer the triple compound of digitalis, colchicum, and prussic acid?—This is his answer. "The digitalis was exhibited to regulate the circulation ; the colchicum on account of the symptoms of incipient hydrothorax; and the hydrocyanic acid, to allay the irritation of the organs of respiration and circulation." So then the "*deficiency of nutriment* in the parietes of the heart," resulting from ossification of the coronary arteries, was compensated for by those mild, nutritious, and cordial medicines, digitalis, colchicum, and prussic acid!—It is hardly necessary to say that we come to a conclusion the very reverse of that to which Dr. Ryan came ; namely, that this said angina pectoris, so very easily cured, was *not* an idiopathic affection of the heart, but symptomatic of disorder in the digestive organs. Dr. Ryan appears to have taken great pains to study the *history* of angina pectoris. We can pretty confidently assure him that when he sees a little more of the *true nature* of the disease, he will not be quite so dogmatical as to its pathology. When he comes to open a few victims to this disease, he will probably be inclined to relax a little as to ossification of the coronary arteries being the essence of the disease. He will find the symptoms of angina pectoris resulting from *various lesions* of that organ—and when they depend on ossification of the coronary arteries, he will not cure them with digitalis, colchicum, and prussic acid, so readily as he cured Miss Mary Lalor.—*Med. and Phys. Journal*, *No.* 303.

14. *Meningeal Apoplexy.*[*] Lady D——e, 62 years of age, of full habit, had been out in her carriage on Tuesday, 10th December 1822, in very good health and spirits. She returned at 4 o'clock, and at 6 was discovered on the floor of the drawing-room, insensible and rolling about. Sir Astley Cooper and Dr. Johnson were summoned, and Dr. Warren and Mr. Freeman arrived soon afterward. When placed on a sofa, Lady D. kept in a state of jactitation, throwing about her arms, rolling her head, and sighing. She was insensible when spoken to, her pulse weak and unequal—skin cool—face pale—pupils obedient to the stimulus of light. A vein was opened in the arm, but only a few ounces of blood flowed. She now appeared to be dying, but rallied a little after an attempt to vomit. Ten grains of the sulphate of zinc, without effect. Mr. Freeman opened the temporal artery, and about 36 ounces of blood were drawn off. On speaking loudly to the patient she now evinced some sensibility, and answered a few questions though indistinctly, relapsing again into a state exactly resembling common sleep. Ten grains of calomel were, with difficulty, got down the throat, and an assafœtida enema administered; and five grains of calomel with a black draught were ordered every four hours afterward, till the bowels should be relieved. No evacuation through the night. At nine next morning (11th) the pulse had got up, and sixteen ounces of blood were abstracted. The pulse now fell—the respiration became laborious—and stertor appeared for the first time. These symptoms, however, disappeared in a considerable degree, the bowels became freely opened, so much sensibility returned that she answered several questions, the pulse becoming regular, forcible, and about 80 in the minute. Sinapisms having been applied the preceding evening, they now occasioned great distress, and it required several attendants to confine the patient's struggles and prevent her getting out of bed. *There was not therefore any paralysis present.* The sinapisms removed, she became tranquil, and again fell into a soporose state. During the whole of this day the pupils were obedient to the light—there was no paralysis or drawing of the face—

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[*] Dr. James Johnson, Med. and Phys. Journal, No. 303.

and the patient was able to swallow liquids. In the evening, the coma having become more marked, cupping-glasses were applied to the temples, and sixteen ounces of blood withdrawn, when the pulse began to flag. At this time so much sensibility returned that Lady D. answered several questions, knew some of her relations, and called them by name. Very soon after ten o'clock, however, the coma returned—the breathing became laborious and stertorous—the pulse irregular. The patient continued to move the head and also the extremities, till three o'clock in the morning of Thursday the 12th, (33 hours from the commencement of the attack) when all voluntary power, except that of deglutition appeared to be lost, and the patient lay in a comatose state till half past 8 o'clock in the evening, or 51 hours from the beginning of the attack, when she expired.

Dissection, by Sir Astley Cooper and Mr. Freeman; Dr. Warren and Dr. Johnson being also present. The dura mater presented no unusual appearance. The arachnoid was somewhat thickened and opake, with a moderate effusion between it and the subjacent pia mater. The pia mater itself, wherever it extended—over the whole of the hemispheres, between them, among the convolutions, and over the base of the brain, medulla oblongata, and as far as could be seen of the spinal marrow, was infiltrated with black blood, resembling very much the tunica conjunctiva of the eye, when highly *bloodshot*. This state was very different from that of mere congestion of the vessels. No blood-vessels, whether veins or arteries, were distinguishable; but the texture of the pia mater seemed completely impregnated or infiltrated with blood, so as not only to change its natural appearance, but quite to obscure its vessels. Besides this general infiltration, or *bloodshot* condition of the pia mater, there was a considerable quantity of blood distinctly extravasated in small globular coagula on the inner surface of the membrane, varying in size from that of a pin's head to the size of a very small pea. Wherever the pia mater was stripped off the brain, these graniform extravasations rose with it, leaving the surface of the brain clean, and of its natural colour. The brain itself was something softer than natural, but exhibited no marks of increased vascularity—no red points when sliced with the scalpel. In the lateral ventricles there was about an ounce of very red serum—a small quantity in the other ventricles and at the base of the brain—the whole amounting to about two ounces. The pia mater covering the cerebellum was in precisely the same condition as that covering the cerebrum. The lining of the ventricles had a reddish blush, but nothing like the *bloodshot* appearance of the pia mater. In the basilary artery and in the circulus Willisii, there were some points of calcareous deposition; but no ruptured vessel was perceptible in the brain.

This dissection offers one of the most exquisite specimens of meningeal apoplexy perhaps on record. In this case, there was no rupture of any particular vessel--no local accumulation of blood--no laceration or excavation of any portion of brain—no *partial* though considerable *general* pressure. The physiological phenomena were in strict accordance with the pathological condition. The *bloodshot* state of the pia mater, while it produced a uniform pressure over the whole of the encephalon, was sufficient to abolish, or at least suspend, the intellectual operations, without actually paralyzing the muscular system, voluntary or aulomatic. It may be observed, that when the effects of this general pressure on the brain were mitigated by the abstraction of 36 ounces of blood, perception and intellectuality were so far restored that the patient answered questions with some degree of distinctness—a circumstance that was still more evident on the evening of the second day, after the abstraction of sixteen ounces of blood from the temples.

It is stated by M. Serres that *meningeal* apoplexy may be distinguished from *cerebral*, in the living body, by the absence of paralysis and the presence of sensibility to stimuli in the *former*;—while, in the *latter*, (cerebral) there will be some degree of paralysis in one or other side, or drawing of the mouth. There was no evidence of paralysis in Lady D.'s case—for the general cessation of voluntary *action* during the last 18 hours could not be called loss of power as in paralysis, but merely that state which precedes death in most diseases. The profound coma, too, would prevent the feeling of any external stimulus, and thus mask muscular power, if it did exist. So far this case coroborates the diagnostic criterion laid down by M. Serres. In one hundred cases of fatal apoplexy at La Pitie, which were carefully watched before death and examined afterward, 21 were uncomplicated with paralysis—and in none of these was there any laceration of the brain, or local extravasation of blood. Sixteen of these presented *serous* effusion—one sero-sanguineous in the ventricles—two with a similar effusion between the arachnoid and pia mater—and two without any effusion at all, but only a general turgescence of the vessels. In every one of the other, or 79 cases, where there was paralysis of one or more members, or drawing of the mouth to one side, there was found some local extravasation of blood in some part of the brain.*

The case here detailed presents a very fine example of local determination (as it is called) to a single membrane in the head, the other structures being left, as it were, untouched. It has been called a *coup de sang* by Continential pathologists, which corresponds with *bloodshot*, the expression here applied, and which conveys a more accurate idea of the appearance than any other term.

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III.

SURGERY.

1. *Lithotomy*.† Mr. Key, one of the most promising young surgeons of the celebrated school that gave birth to the present lateral ope-

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* See Dr. Cooke's valuable work on Palsy, p. 702.

† A short Treatise on the Section of the Prostrate Gland in Lithotomy; with an Explanation of a safe and easy Method of conducting the Operation

ration has come before the surgical profession, not to propose a novelty, or deviation from, but rather a closer approximation to, the principles of Cheselden's operation, than can be attained by the instruments now commonly employed. A review of Cheselden's principles is, he thinks, required at the present time, when attempts are made by English as well as Continential surgeons, to revive a mode of operating "that presents no advantage under ordinary circumstances—that was discarded by Cheselden—and needs an equal test of time and experience to show its comparative merit." If want of success in the lateral operation, he observes, has led thus to its disrepute, it becomes a question worth investigating, how far it may be traced to a neglect of those principles which guided the illustrious Cheselden himself.

We have already said that Mr. Key does not come forward with any idea of innovation on the *principle* of the lateral operation, "but merely to suggest an easier *mode* of accomplishing the same object." The success of Cheselden from the year 1731, at St. Thomas's Hospital, where he cut 52 patients in succession, with the loss of only two, attracted the attention of the surgeons of all Europe, who eagerly sought to acquaint themselves with his practice, and closely follow his steps. But his imitators were not so successful as himself, and various improvements, or rather *changes*, were, from time to time attempted. Among these ranks first, the gorget introduced by Sir Cæsar Hawkins. The fundamental objection to this instrument, in Mr. Key's opinion, is, that from the manner in which it is introduced into the bladder, *it cannot divide the parts according to Cheselden's operation.* Here it becomes necessary to inquire what was the mode in which Cheselden did operate? In his first operation he followed the plan of Frere Jacques, but soon laid it aside. His next operation is thus described by Douglas.

"His knife entered first the muscular part of the urethra, which he divided laterally, from the pendulous part of its bulb, to the apex, or first point of the prostate gland, and from thence directed his knife upward and backward all the way to the bladder." P. 4.

This, or second mode, he also abandoned, probably from having wounded the rectum in some of his operations. The following appears to be his third and last mode of operating.

"An assistant holding a long and curved staff, Cheselden, with a pointed convex-edged knife, made his usual large external incision through the muscles of the bulb and crus penis, and part of the levator ani, till he could feel with the forefinger of his left hand the prostate gland, at the same time keeping the rectum down, and preventing it being endangered: then, pressing his finger behind the prostate, and feeling the groove of the staff, he turned the edge of his knife upward, pierced the cervix vesicæ, till the edge rested in the groove; and com-

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on the Principles of Cheselden. Illustrated by Engravings. By C. Aston Key, Surgeon to Guy's Hospital, and to the Magdalen. 4to. pp. 34. Four plates. Longman and Co. May 1824.

pleted the division of the prostate and membranous part of the urethra by withdrawing the knife towards himself." 7.

John Bell describes this last operation of Cheselden's in the following words:—"He struck his knife into the great hollow under the tuber ischii, entered it into the body of the bladder immediately behind the gland, and drawing the knife towards him, cut the whole substance of the gland, and even a part of the urethra;" or, in other words, "cut the same parts the contrary way;" alluding to this operation as contrasted with the second. In short, from the concurrent testimonies of those most likely to be acquainted with Cheselden's mode, and which are fairly cited by Mr. Key, there can be no doubt that the prostate gland was divided by that celebrated surgeon in a manner very different from that in which the gorget divides it at the present time. Cheselden's aim was to divide the prostate in the depending part of the left lobe, with a considerable inclination towards the rectum. "The most dexterous operator with the gorget cannot effect this," says Mr. Key;—"the direction which the gorget takes is the very reverse of this—it is directed to be inclined upwards, by which the upper surface of the gland only is sliced off, and the major part of the gland remains whole." 10.

Having made these preliminary sentiments respecting Cheselden's operation, Mr. Key proceeds to adduce his own observations on this important subject.

The form of the staff has always appeared to Mr. Key to present great difficulty in executing the operation on the true principles of the lateral lithotomy.*

"At the part where it serves the purpose of a director it is curved; a form certainly least adapted to convey a cutting instrument with safety where the eye of the operator cannot follow it; and, whether the knife or gorget be used, difficulties, though of a different kind, present themselves. When the former is propelled along the groove of the curved staff, as in Mr. Martineau's operation, the edge must be turned, if not directly downward, at least not sufficiently toward the left side of the patient to effect the necessary division of the prostate gland; unless the operator be skilful enough to turn the blade and divide the lobe of the gland, in doing which he is obliged to make two incisions, as Mr. Martineau has observed. 'I introduce,' says that gentleman in his valuable paper in the Medico-Chirurgical Transactions, 'the point of my knife into the groove of my staff as low down as I can, and cut the membranous part of the urethra, continuing my knife through the prostate into the bladder; when, instead of enlarging the wound downwards, and thus endangering the rectum, I turn the blade towards the ischium and make a lateral enlargement of the wound in withdrawing my knife. I thus avoid cutting over and over again, which often does mischief, but can give no advantage over the two incisions, which I generally depend upon, unless in very large subjects, when a little further dissection may be required.'

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* "The late Mr. Dease was so impressed with the hazard of passing a cutting instrument along the curve of the staff, that he used to withdraw the staff, after he had opened the urethra, and passing a director through the opening into the bladder, dilated the cervix vesicæ, by introducing the gorget in the usual manner."

" While quoting this gentleman's description I take the opportunity of mentioning that I had the pleasure of seeing him operate at Norwich in the Summer of 1818, and from his deservedly high character, as a successful Lithotomist, I was induced to pay most minute attention to the several steps of his operation; and I am satisfied from my own observation, as well as from his words, that he conducts his incisions of the several parts precisely on the principles laid down by Cheselden. The depth, extent, and direction of his external incision, and the division of the prostate gland, appear to me to accord in every particular with the operation of the great Lithotomist." 13.

In using the gorget there is the danger of the beak slipping out of the groove of the staff—a danger not imaginary. The operator has to attend to two sensations—the gliding of the beak along the staff—and the resistance made by the prostate gland. While he is overcoming the *latter*, he becomes unconscious of the *former*—and at the time he impales the prostate, loses all certainty of the beak being within the groove. " This difficulty depends as much on the curve of the staff as on the nature of the cutting-gorget, and is one that every candid surgeon must acknowledge frequently to have experienced."

The operator, in raising his hand and giving the first impetus to the gorget, is aware of the hazard he runs, lest the blade slip between the gut and prostate. By depressing it, he is in danger of thrusting the beak at right angles against the staff, so that the beak cannot run along the groove, or is nearly broken in the attempt. These accidents our author has witnessed, and they are by no means uncommon. Bell and Martineau dwell on the nicety of tact necessary in this part of the operation. " I would recommend," says Martineau, " every young operator to practise the directing of the gorget in the groove of his staff when he holds them in his hand, and he will perceive how easily the beak may slip out, if the convex part of the staff be not familiar to his observation." It is to be recollected that Cheselden never used the staff as a *director*—to the gorget belongs the merit of bringing the staff into this office. " Is it surprising," asks Mr. Key, " that the blind should err in a crooked path?"

In consequence of the inclination upwards of the gorget, which the operator is desired to give, the several sections are made too high—giving rise, according to our author, to the following unavoidable evils:—

" First. The cutting edge of the gorget is conducted so high under the narrow angle of the pubic arch, as to incur a great risk of wounding the pudic artery; a frequent consequence of the introduction of the gorget in adults, being, as is well known to surgeons, a profuse gush of arterial blood; and, what is more material, not unfrequently great difficulty in restraining the hæmorrhage after the operation.

"Secondly. In the section of the prostate, the gorget is carried upward through the large plexus of veins which surround the upper surface of the gland, by which long-continued venous hæmorrhage is produced, filling the opening into the bladder with coagula, and preventing the ready exit of urine, both by the wound and penis; thus producing the infiltrations of urine into the cellular membrane, which frequently cause so much irritation after Lithotomy.

"Thirdly. The section of the prostate is made in a direction most unfavourable to the extraction of a calculus. Instead of the free incision made through the depending lobe of the gland by Cheselden, the gorget merely slices off the upper and narrowest part, leaving the body of the gland, which affords so much resistance to a stone, untouched. This slicing of the gland never affords room enough for a large calculus to pass, and, in the violent efforts to extract it, either the bladder is torn laterally, or, what is worse, the prostate is dragged towards the external wound, and its ligamento-cellular connexion with the arch and ramus of the pubes destroyed. When the operation is properly performed, that is, when the wound in the prostate is sufficient for the passage of the calculus, the connexion between the prostate and the arch of the pubes remains; and affords an opposing barrier, when the finger is attempted to be thrust upwards by the side of the bladder. The consequences attending the destruction of the attachment of the prostate are worthy of consideration." 18.

To appreciate the consequences of laceration of the prostatic connexions, we must examine accurately the cause of death after lithotomy. This is generally attributed to peritonitis, which Mr. Key avers to be "an extremely rare occurrence, and still more rarely the cause of death," after this operation. During ten years' observation at Guy's and St. Thomas's hospitals, he has never seen an unsuccessful case examined after operation, where the cause of death could be fairly charged to the peritoneal inflammation. One pathologic condition, however, he has invariably found to obtain—*suppurative inflammation of the reticular texture surrounding the bladder.* The serious evils to the constitution which result from such a circumstance are illustrated by analogy. Thus in injuries of the scalp, if the wound has penetrated the tendon of the occipito-frontalis, we expect extensive suppuration, not from injury of the tendon, *quoad tendon*, but from laceration or other injury done to the cellular membrane between the tendon and pericranium. So wounds of fasciæ, in the extremities or other parts, are dangerous, not from the injury done to the tendinous fibres, "but from the exquisitely acute inflammatory action set up in the subjacent cellular tissue."

"This reticular membrane may be regarded as an infinite number of serous cavities, communicating with each other, and presenting an incalculable extent of surface. Inflammation spreading rapidly through these cells will quickly affect a surface much greater than that of the peritoneum, and I have witnessed symptoms as acute, pain as severe, and the peculiar depression attending peritonitis as marked in the reticular inflammation, as in the most acute and fatal case of inflammation of the abdominal cavity. The instances I have met with of the texture surrounding the bladder being affected with suppurative inflammation, and terminating fatally, whether arising from Lithotomy or operations for fistulæ in perinæo, are sufficiently numerous to allow me thus to generalize on the subject, and afford a very useful lesson to those who endeavour to profit by examinations after death. In the inspection of those who die after Lithotomy, it is not sufficient to look into the peritoneal cavity, to open the bladder, or to examine the state of the wound; the peritoneum lining the lower part of the abdominal muscles should be stripped off, and the source of evil will then be laid open. The finger will enter a quantity of brick-dust coloured pus in the cellular substance around the bladder, and if considerable force has been used in the extraction of the stone, will readily find its way towards the wound in the perineum; the barrier between the adipose structure of the perineum and the reticular texture of the pelvis being broken down, the suppurative inflammation spreads rapidly along the latter, and may be traced in some cases, between the peritoneum and abdominal muscles, as high as the umbilicus; in one case I have seen it extend to the diaphragm." 21.

Lastly. Every surgeon fears the slipping of the gorget between the bladder and rectum. Mr. Key much doubts whether this be the direction which the gorget takes when it slips from the staff. In the only instance where he had an opportunity of examining after death, the gorget was found to have slipped from the groove, and was propelled under the arch of the pubes, where it entered the reticular texture above, and to the left side of the bladder. He believes this to be the usual course of the gorget in such accidents.

In order to obviate the evils attending the gorget and curved staff —and, at the same time, to adhere closely to the operation of Cheselden, Mr. Key uses a straight director, which he finds to answer all the purposes of a common staff, while it is free from its objections. He did not adopt this alteration without first operating at the hospital, both with cutting gorget, and beaked knife. Nor did he lay these aside in consequence of want of success, as the patients recovered—but from the difficulty and hazard attending their introduction—and the general unsuccessful issue of gorget operations compared with Cheselden's method.

Mr. Key's director is straight, with a slight curve near the extremity, to prevent the point being caught in a fold of the bladder while depressing the handle. The groove is made somewhat deeper than in the common staff, to prevent any risk of the knife slipping out. The extremity is not grooved, but rounded like a common sound, to prevent abrasion of the prostate or mucous lining of the bladder. The handle is somewhat larger, to afford a better purchase to the hand. The chief superiority of this instrument consists in its allowing the surgeon to turn the groove in any direction he may wish. Before carrying the knife into the prostate, the groove, which has been held downwards for the first incision, "may be turned in an oblique line towards the patient's left side that the operator may think preferable for the division of the prostate." Nor does it preclude the use of the gorget. This instrument may be propelled along the straight groove with more safety than in the curved staff. When the gorget is employed, the corresponding motion of the left hand is not required to carry it into the bladder. The director should be held perfectly quiet while the gorget is propelled along the groove.

The knife resembles, in form, a common scalpel, but is longer in the blade, and is slightly convex in the back near the point, to enable it to run with more facility in the groove of the director. The opening made in the prostrate, and also in the perineal muscles, can, in some measure, be regulated by the angle which the knife makes with the director as it enters the bladder. In the majority of cases, our author observes, it will merely be necessary to pass the knife along the director, and having cut the prostate, to withdraw it without carrying it out of the groove, varying the angle according to the age of the patient, the width of the pelvis, and the size of the stone. But we shall give the steps of the operation in Mr. Key's own words.

"An assistant holding the director, with the handle somewhat inclined towards the operator, the external incision of the usual extent is made with the knife, until the groove is opened, and the point of the knife rests fairly in the director, which can be readily ascertained by the sensation communicated; the point being kept steadily against the groove, the operator with his left hand takes the handle of the director, and lowers it till he brings the handle to the elevation described in plate 3, keeping his right hand fixed; then with an easy simultaneous movement of both hands, the groove of the director and the edge of the knife are to be turned obliquely towards the patient's left side; the knife having the proper bearing is now ready for the section of the prostate; at this time the operator should look to the exact line the director takes, in order to carry the knife safely and slowly along the groove; which may now be done without any risk of the point slipping out. The knife may then be either withdrawn along the director, or the parts further dilated, according to the circumstances I have adverted to. Having delivered his knife to the assistant, the operator takes the staff in his right hand, and passing the fore-finger of his left along the director through the opening in the prostate, withdraws the director, and exchanging it for the forceps, passes the latter upon his finger into the cavity of the bladder.

"In extracting the calculus, should the aperture in the prostate prove too small, and a great degree of violence be required to make it pass through the opening, it is advisable always to dilate with the knife, rather than expose the patient to the inevitable danger consequent upon laceration." 30.

In the case, in which Mr. Key lately operated in this manner, the stone was very readily extracted, though of a large size, from the bladder of a boy four or five years old, in the presence of Messrs. Travers, Green, and Tyrrell.

We sincerely hope Mr. Key's modification may supersede the dark and dismal operation by the gorget. Four excellently engraved plates are appended to the work, which, we trust, will not be the last which we shall receive from the same pen.

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2. *Amputation of the Lower Jaw* This terrible operation was lately performed by Professor Lallemand, of Montpellier, under circumstances at once unexpected and appalling. The operator evinced, on this trying occasion, a firmness of mind, a quickness of apprehension, and a fertility of resource, which are no trifling advantages in the hour of difficulty and danger.

The patient was afflicted with a disease—a cauliflower looking mass or tumour, involving the lower jaw and neighbouring parts, that left no other resource but a bold and bloody operation, which was performed by M. Lallemand, at the SAINT ELOI HOSPITAL, on the 11th October, 1823. The steps of the operation we shall not detail. Suffice it to say, that the tumour and maxilla inferior were removed by knife, saw, and chissel, amidst a deluge of blood. But this was not the worst. Towards the close of the operation, and before any of the numerous vessels could be secured, the man, after making some laborious efforts to breathe, fell down apparently dead on the floor. "Ces apparences de mort, l'aspect hideux et effrayant de cette figure mutilee et cadavareuse jeterent l'effroi et la consternation parmi les eleves. Deux ou trois, seulement, furent en etat de m'aider jusqu'au bout." Seeing the blood still projecting from the mouths of twenty vessels, M. Lallemand properly concluded that this was not death, nor even syncope from loss of blood. He instantly suspected that the air passage was blocked up with coagula, and on putting his finger into the pharynx, found the tongue reversed into the back part of the mouth, (renversee dans l'arriere-bouche,) and the posterior face of the larynx squeezed against the cervical vertebræ. He quickly perceived that the section of the genio-glossi, genio-hyoidei, and mylo-hyoidei muscles had allowed their antagonists to convulsively produce this "bouleversement" in the situation of the tongue and larynx, and prevent the ingress of air into the lungs, causing, in fact, suffocation. He thus found himself between the two horns of a dilemma—asphyxia on one hand, and hæmorrhage on the other. He rapidly concluded, in his own mind, (and rightly concluded,) that he could not replace the blood if it once issued from the vessels, (je pensais que je ne pourrais pas faire rentrer le sang dans les vaisseaux une fois qu'il serait sorti) although he might be able to introduce air into the lungs a considerable time after they had ceased to perform their functions. He therefore disregarded the suffocation, and attended only to the hæmorrhage. The white-hot cautery was successively applied to the bleeding vessels, and although each application caused the blood to spring with redoubled force for a moment, the hæmorrhage soon ceased. During these successive cauterizations the patient exhibited scarcely any signs of life, and the few students who were able to bear the sight, were astonished at the sang-froid with which our author persevered in searing the wounds of a man whom they considered as dead. They could not, of course, have been aware of the train of thoughts that passed through the operator's mind previously. The hæmorrhage stopped, our author seized a bistoury, and plunged it into the air-passage, between the thyroid and cricoid cartilages. Instantly the air rushed into the lungs—the patient breathed—opened his eyes and looked about, as if awaking from a profound sleep—and immediately raised himself on his breech. The wound was dressed, and a canula left in the tracheal orifice. No bad accident occurred, and the man perfectly recovered. He could make himself understood, notwithstanding the loss of his jaw—and by pushing the food, finely cut, up into the pharynx with his fingers, he managed to take plenty of nourishment, so that he left the hospital in a state of embonpoint.—*Journal Complement. Mars.*

We think the detail of the above case will justify the eulogies which we passed on M. Lallemand's firmness and fortitude in this embarrassing scene.

3. *Priapism.* A distressing case of this kind occurred in the practice of Mr. Callaway, and is detailed in the April number of the Med. Repository. It lasted sixteen days, in spite of every medicine and means that could be suggested. At length a lancet was pushed into the left crus of the penis, below the scrotum, and a large quantity of dark grumous blood, with numerous small coagula, escaped. For several days the aperture continued to discharge blood mixed with pus into the poultices; in a few days after which, the man was able to return to his work. Impotency was the consequence of this disease.

4. *Paracentesis Capitis.* Mr. Brown, of Preston, has related a case of this kind in No. 300 of the Medical and Physical Journal. The patient was a female child, five years of age, who had been ill for some weeks before Mr. Brown saw her. When visited on the 16th September, 1823, the child was perfectly quiet, eyelids half-closed, pupils insensible to light, head very large, fontanels enlarged, and the integuments much distended, with a sense of fluctuation on pressure. The next day an operation was proposed to the mother, and consent, with great difficulty, obtained. An incision with a lancet was made through the integuments at the frontal angle of the right parietal bone, and then a trochar introduced. Nine ounces of a clear lemon-coloured fluid issued forth. A bandage was then applied pretty tight round the head. The child was rather more alive to external impressions after the operation. Blue ointment was ordered to be rubbed in, and calomel and digitalis to be given internally. 18th. Pulse 170—bowels open—child lively. 19th. Pulse lower,

and child still more lively. 20th Had convulsions last night—hemiplegia (in the mother's opinion) this morning, on the right side. 21st. The child playful—motions of the limbs all free—eyes susceptible to light—pulse 165—bowels open—fæces of a yellow colour. 24th. Strabismus—vertex prominent—fluctuation. Operation proposed, but not consented to. We need not detail the daily reports till the 16th of October, when it is stated that the child lies comatose, being "blind with its eyes open," to use the expression of its mother. The integuments of the cranium are exceedingly tense. The operation again performed, but nothing except blood escaped through the canula. Another puncture was then made about an inch from the former, when blood and pieces of brain came away, and then better than nine ounces of sero-sanguineous fluid. After the operation the child got sick and vomited; but subsequently became rather lively. 18th. The child is completely lethargic and paralytic. The canula was again introduced, and six ounces of fluid drawn off. This operation was followed by a temporary revival. 20th. The child again comatose. The operation performed, and four ounces of fluid drawn off. On the 22d a spontaneous evacuation took place, after which, "the child recovered most surprisingly." On the 24th the child died.

Dissection. Cerebrum very pale and soft—great quantity of water in the ventricles—choroid plexus very pale, and containing a cluster of hydatids. "The quantity of fluid removed by the examination amounted to about a quart."

We must confess that a careful perusal of this case, and an unbiassed reflection on the pathology of the disease do not bring us to Mr. Brown's conclusion, that—"paracentesis capitis, in the chronic form of hydrocephalus, holds out *great hopes* of eventual success, provided the operation be early employed." Do we see any thing like success attending the removal of water from the chest, or even the abdomen, by an operation? And is not success much more likely to follow paracentesis in these last cases than where water is collected in the ventricles or under the membranes of the brain? By this observation we are far from wishing to detract from the boldness and zeal of Mr. Brown.

5. *Obliterated Urethra.* Mr. Maclure (of Glasgow) relates the case of a man, aged 40, who, many years previously, had suffered severely from mismanaged or obstinate venereal ulcers. When he applied to our author, the lower segment of the glans penis was found wanting—there was a fistulous opening in the perineum, through which the urine had flowed for years, and from which a probe could be passed backwards towards the bladder, but not forwards towards the glans, on account of an obliterated portion of the canal, about an inch and a half in extent. Down to this obliteration a bougie could be introduced from above. The obliteration occupied, in our author's estimation, the place of the bulb, and perhaps a small portion of the membranous part of the urethra. There was a grave debate between Mr. Maclure and his partner, whether an attempt to reme-

dy the defect should be made, or the man left *in statu quo*. At length an argument was started, which instantly decided their determination. It was suggested that, if *they* did not attempt the cure, some others might:—and be successful. This argument was conclusive in favour of an operation. The next point of discussion respected the means. The caustic bougie of Home was carried against the plans recommended by Dessault, Physic, Bell, and others. The armed bougie indeed seems to be in higher estimation with Mr. Maclure than with the surgeons on this side of the Tweed. The operations were commenced on the 15th of November, 1822, and practised every second day till the 16th of January following, when the bougie "evidently passed onwards to the bladder." On the following day a catheter was passed through the new channel into the bladder, and urine was discharged by it for the first time during a period of sixteen years. For some time things went on well; but abscesses formed, and great impediments were thrown in the way of anticipated success. At length, by the middle of June, the man was able to make water *per vias naturales*, and perform other important functions, the fistulous opening being firmly pressed upon with the finger.

When our author was projecting an ingenious mode of closing the fistulous opening by means of "an instrument constructed upon the principle of a cheese *pale*, as it is called, or of a wright's *wimble*, which being introduced into the fistula and turned round, might so denude its sides of skin, as to make their adhering to one another a matter of certainty," an event occurred which dissolved his benevolent schemes into air—thin air. "Two days ago my patient found it necessary to leave town, under circumstances which exclude all hope of his return to his wife and friends; but which prove, in the most conclusive way, the completeness of the cure, and his perfect confidence in his restored virility." *Ed. Journal*, No. 2.

Thus, then, the removal of a *physical* defect only led to the commission of a *moral* crime! And two months' boring of the urethra by a *caustic bougie* only *opened the way* to adultery and the desertion of an affectionate wife! Oh! Sir Everard! How much have you to answer for in the land of spirits!

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5. *Extirpation of the Parotid Gland.* In the *Archives Generales* for January, M. Berrard has reported the above operation as performed by M. Beclard in LA PITIE on the 19th of August, 1823. The patient was a paper-stainer, who entered the hospital for a cancerous ulceration of the parotid gland. The disease had commenced eight years previously; but, though indolent for a long time at first, it had latterly increased rapidly and become the seat of lancinating pains. It was fixed, and when he entered the hospital, it was of considerable elevation. It raised the lobe of the ear above, apparently involving the cartilaginous portion of the auditory canal—downwards it extended more than an inch below the angle of the jaw—backwards it adhered to the sterno-mastoid muscle—and anteriorly it covered a great part of the masseter. It was ulcerated in two places.

Operation. The tumour was enclosed by two curved incisions, one inferior and one posterior. That part situated over the masseter was easily dissected off. Then an attempt was made from below upwards; but a projection of its substance plunged deeply behind and beneath the internal pterigoid, the removal of which would, the operator thought, endanger hæmorrhage. M. B. therefore decided to dissect upwards, by striking the bistoury into the structure of the tumour itself, on a level with the projection, while the instrument divided the cellular tissue connecting it with the adjoining parts. Half the inferior circumference of the cartilage contributing to form the auditory canal was removed by the first dissection. Numerous arteries were tied at this stage of the operation, and M. Beclard continued the extirpation of the remainder of the tumour. When nearly the whole scirrhous mass was removed by successive slices, a large jet of arterial blood announced the section of the external carotid, or one of its large branches. A finger was put on the place whence the jet issued, and the vessel was seized with the forceps, while a needle with a double ligature was passed around it. An assistant tied the vessel above and below the wound in it, which was lateral. The artery was then held forward out of the way, whilst the surgeon completed the extirpation of great part of the tumour. One small projection of the tumour placed before the cervical vertebra was left, on account of its proximity to the internal jugular vein. M. Beclard passed two ligatures beneath this part, by means of a needle, tying the one at the superior, the other at the inferior extremity. The wound, which formed a tremendous chasm, was dressed forthwith. Nothing particular occurred for the first days after the operation. All that side of the face was bereaved of expression. The right eye remained open, and, in consequence of being dry, became inflamed. The suppuration was going on kindly, and healthy granulations covering the wound when, on the 12th day, the patient experienced rigours, followed by fever. Erysipelatous inflammation attacked the neighbouring parts, and delirium supervened. When this subsided, taciturnity ensued, and ultimately mental alienation, ending in death, better than three months after the operation, the wound being closed except in one place near the ear, where it was again assuming the cancerous appearance.

On dissection, the pia mater was found injected, water in the ventricles, some pus in the meatus auditorius. The external carotid artery was found to terminate in cellular membrane resulting from cicatrization of the wound—the internal jugular vein was obliterated at the same place.

7. *Tetanus Traumaticus.* Mr. Liston lately amputated the lacerated hand of a boy in whom tetanus took place some days after the laceration. The branch of the median nerve going to supply the thumb was found torn two-thirds across, and its extremity inflamed and thickened for nearly an inch. The opisthotonos went off after the operation, and the jaw could easily be opened, so that sanguine expectations of recovery were entertained. But the boy was obstinate, and would not take his

medicines (calomel and opium with purgatives) and the spasms returned. He died three weeks after the accident, and eight days after the amputation. Mr. Liston thinks that had the amputation been earlier performed, before the disease was completely established, success would have been more probable.—*Ed. Journal.*

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8. *Denuded Nerves of the Teeth.* Mr. Koecker, an eminent dentist from the United States, and who is now settled in this metropolis, has published a paper in our respected cotemporary (*the Med. and Phys. Journal for March*) on the "treatment of the nerves and lining membrane of the teeth, when denuded," from which we shall make an extract or two.

Mr. K. considers the remedies which have been recommended for these diseases as "cruel and contrary to reason." These remedies are, the knife, acids, and actual cautery, with a view of destroying the nerve of the tooth and its investing membrane. The pain of this operation "is so intense and protracted," that few patients are willing to submit to it; but this is not all—in some irritable constitutions the operation is followed by "an inflammation of the whole mouth, which becomes soon concentrated upon the parts near the affected tooth, where tumefaction and suppuration take place." This requires the extraction of the tooth. But suppose these accidents do not take place, "a tooth which has been deprived of its vitality by the destruction of its nerve, acts upon the parts with which it is in immediate contact as a foreign dead body. It produces all the evil effects which are usually the consequence of a dead root of a tooth, but in an infinitely greater degree."

"In treating a case of the kind under consideration, I have always held it a principal object to preserve the life of the lining membrane, and thus to save the life of the whole tooth.

"My indications for the attainment of this purpose are—

"1. To put a stop to the caries, and consequently to prevent the irritation upon the internal membrane of the tooth.

"2. To suppress the hæmorrhage, and cure the wound of the membrane, if it be wounded.

"3. To protect the membrane artificially against the action of all foreign or external agents.

"To obtain the first of these objects, I cut away all the unsound or dead parts of the tooth, so that every part of the carious cavity be sound, firm, and white. I give the cavity the best possible form for the reception of the metal and its firm retention. I next wash it out with a little lock of cotton, fastened to a straight elastic probe, dipped in warm water. The cavity must be very carefully freed from the small pieces of bone that may stick to it.

"If the lining membrane is not wounded, I immediately plug the cavity with metal; but, if there exist a wound and hæmorrhage, I resort to the treatment for the second indication, by which I endeavour to put an immediate stop to the bleeding, and to cure the wound. For this purpose, I was for some time, in the commencement of my practice, in the habit of employing mild acids and styptics; but I did not find those applications answer any good purpose. The first act destructively on the surrounding parts, and the second were not sufficiently certain in their operation. I therefore soon abandoned such remedies, and resorted to the actual cautery. By this application I readily effect an artificial cicatrization of the wound and a stoppage of the hæmorrhage.

"I require for the operation the following apparatus—1. A thin iron wire, fastened to an ivory handle. The extremity of this wire I file to about the thickness of the exposed surface of the nerve; and bend the wire in such a manner as to enable me to touch the exposed part of the membrane, without coming in contact with any other part of the mouth. 2. A tallow candle, with a thick wick. I direct the patient to discharge all the saliva he may have in his mouth; and then let him incline his head backwards against the head-support of my operation chair. I put the candle into his left hand, and direct him to hold it so that the flame of it may be in a position horizontal with his mouth, and about eight inches from it; I now place myself on the right side of the patient, and, holding his lips with my left hand, so that the instrument may not touch them, I again dry the cavity as perfectly as possible with a lock of cotton fastened to the point of the cauterising wire. Having effected this, I throw away the cotton from the extremity of the wire, and make it red-hot in the flame of the candle. With the wire thus heated I touch the denuded part very rapidly, so that its surface forms an eschar; without, however, suffering it to penetrate deeply into the substance of the bone or the cavity, for this would inevitably bring on suppuration and destruction of the nerve. The nerve must be touched very quickly, and the cautery be perfectly *red* hot. It is sometimes necessary to apply it two or three times before the parts are sufficiently cauterised. When the cautery is red hot it acts suddenly, and almost entirely without pain: but, when it is merely hot, much pain and inflammation is generally produced." 193.

When the hæmorrhage is arrested, Mr. K. leaves the further healing to nature. The last step is to secure the nerve against the influence of the air, by filling up the cavity of the tooth with metal.

"The nerve, which before cauterisation, assumes a fleshy appearance, looks, after this operation, like a black point. I take care not to disturb this point; for, if the black scar be removed, a new wound will be formed, and bleeding induced. I now take a small plate of very thin lead leaf, and lay it upon the denuded nerve and the immediately surrounding bony parts. I next fill up the whole cavity very carefully with gold. In order that success may attend this operation, it is absolutely necessary to make the proper curative applications with the utmost degree of exactness and care, since the smallest error in this will inevitably bring on a destruction of the life of the tooth, and consequently its loss. Thus, for instance, the whole of the operation will prove abortive, if the smallest particle of dead matter, or inflamed bony substance, is suffered to remain in the cavity. Such foreign dead matters, left in contact with the living tooth, soon acquire corrosive qualities, and act destructively upon the contiguous parts, by irritating and inflaming them. If any particles be allowed to remain in contact with the nerve, it is impossible that the operation can succeed properly. Even the smallest quantity of blood left in the cavity soon becomes corrosive, and prevents the success of the operation. All kinds of moisture must be removed before introducing the metals, as the two contiguous metals might produce galvanic effects, if there be any intervening moisture, and thus create a source of irritation and inflammation to the nerve.

"When, therefore, the cavity is once completely cleared of the loose particles of matter, and made perfectly dry, the metal should be quickly introduced, without giving it time to become moist again from the natural exhalations in the mouth. The gold should, of course, be pressed as firmly and compactly into the cavity as possible, in order to prevent the insinuation of any moisture under it. It is here that the skill of the operator becomes of the highest importance; for, if he has been successful in preserving the life of the nerve, the duration of the tooth depends on the skilful manner in which it is plugged; and this is one of those operations by which one dentist may have an opportunity of displaying his superiority over another." 194.

We wish every success to Mr. Koecker; and can say that he has brought with him testimonials from America, of the most honourable kind.

9. *Intestinal Tympanites.* Dr. Levrat, Physician of the Hotel Dieu of Lyons, has related a curious case of this kind which was cured by puncturing the intestine, and setting free its gazeous contents. The patient was Madame Lepin, to whom he was called on the 25th day after a painful delivery, in which the fourchette was torn. He found the patient apparently dying; with facies hippocratica, small, creeping pulse, cold extremities, and tumefied abdomen, which was very painful on pressure. Cordials, anodynes, and emollients were first prescribed, and removed the most urgent symptoms; but intestinal tympanites remained, and continued, in spite of various medicines, to increase to an enormous extent. The convolutions of the bowels could be distinctly traced, and the air could be heard rushing from one knuckle of intestine to another. Emaciation had made great progress. Dr. L. determined on an operation. A very delicate trochar was constructed, not much larger than a darning needle, and about two inches in length. This was pushed through the parietes of the abdomen, on the right side, midway between the navel and the spine of the ilium, and into a projecting roll of inflated intestine. Immediately the stilet was removed, a quantity of gas rushed out through the canula, and the belly experienced a great reduction in size. The patient passed a good night, and next day a large quantity of hardened scybala came away, with infinite relief to the lady. From

this time she went on well, and rapidly recovered. We forgot to mention that the canula (corked) was left in for some hours, and then some more gas drawn off.

This operation has been practised before, for tympanites, but not, we believe, with success—probably because the wound in the parietes of the belly and in the intestine was made with too large an instrument, in consequence of which gas or other matters may have escaped from the intestinal tube into the general cavity of the peritoneum, and there excited inflammation. In Dr. Levrat's operation, the instrument was nearly as fine as that used in acupuncture, and consequently the wound in the intestine was so small as not to permit the escape of any intestinal contents into the cavity of the peritoneum, when the trochar was withdrawn.—*Bulletin des Sciences.*

IV.

THERAPŒIA.

Pharmaca nulla valent, nisi quæ sint commoda causis.

1. *Antimony in the Phlegmasiæ.* A mystery and doubt still hang over the Italian mode of treating the phlegmasiæ by large doses of the tartrite of antimony. Dr. Fontaneilles has recently published his testimony respecting this litigated question, in the ARCHIVES GENERALES for February last, from which we shall abridge some of the particulars. We need hardly remark that the employment of tartar emetic is no new practice in the phlegmasiæ—but it was only considered as an auxiliary to blood-letting and other evacuations. The peculiarities of the Italian practice, and especially that of Rassori, consist, 1st in treating pneumonia, from beginning to end, with this medicine—2d in making it the principal, or almost the sole remedy—3d to thus reduce, or rather discard blood-letting—4th to exhibit the medicine in doses that would appear frightful to former practitioners—that is, to the amount of a scruple, or even some drachms in the 24 hours, and that without producing either vomiting or violent purgation.

The first accounts of this practice staggered the beliefs of physicians, who insisted that some fallacy must have crept into the reports. It was said that the medicine could not have been of its proper strength, or that the patients could not have swallowed the doses that were prescribed. Both these doubts have been cleared away, if we can credit the assertions of Dr. Fontaneilles (Physician of the Military Hospital of Milan) who has given the medicine to be analyzed and experimented on by those who were competent to the task of both. Many physicians scrutinized the exhibition of the remedy in the doses described—without being able to detect any fallacy in the practice.

Our author observes that this capability of sustaining such large doses of emetic tartar depends entirely on a certain morbid state of the system—for when this morbid condition is removed, the power of taking the remedy in large doses with impunity or advantage, immediately ceases also. This, he insists, is the true and only solution of the enigma; and this indeed is most indubitably the cause, as we have hinted in a former number of this journal. This morbid condition, or diathesis, which bears the reception of such large doses of the antimony, varies in different cases of peripneumony for it is of peripneumony which our author treats in this paper) and in different stages of the same case. Thus, this diathesis is less prominent in the beginning and in the decline of the inflammation—and most powerful at the acmé of the disease. The doses of the medicine must be regulated according to these epochs, otherwise their common effects will be produced. In general our author commences with not less than twelve grains in the day, and the same quantity in the course of the night. But when he finds that the pneumonia has made progress, he gives from a scruple to half a drachm in each of the above periods, gradually augmenting the quantity, according to the violence of the disease. Sometimes, but merely as exceptions to general rules, the dose of the medicine exceeds the ratio of the diathesis, and then vomiting is the result. At other times, the violence of the symptoms, as the cough, pain, dyspnœa, &c. will abate, while the force of the diathesis remains undiminished—as known by the capability of bearing the large doses still continuing. We must not therefore diminish the dose with the diminution of the symptoms—*unless we find the power of bearing the medicine also diminish.* Again, some of the troublesome symptoms may persist, notwithstanding that the diathesis is declining. "Thus the breathing may become more short or laborious, or delirium and tendency to coma may supervene—and if, in these cases, we find a diminished aptitude in the constitution to bear the large doses of antimony, we may conclude that organic changes are taking place, which will set at nought the resources of our art."

The cessation of the diathesis is soon proved by the patient not being able to bear the smallest quantity of the tartar emetic, without loathing and disgust, although previously swallowing large quantities without the smallest inconvenience, but, on the contrary, benefit Although our author looks upon emetic tartar as a direct sedative, and in this respect similar to digitalis, yet he observes that its exhibition, in full doses, is not attended with the same bad effects as sometimes attend the latter medicine. He has never seen the pulse reduced below 50 in the minute by antimony, and but rarely any irregularity in the action of the heart.

Our author has been asked why he does not abandon blood-letting altogether, since he has found so effectual a remedy for pneumonia in emetic tartar? His answer to this question is, we think, a very wise one. "In many cases (says he) the pneumonia runs its course so rapidly that the structure of the lungs is menaced with destruction, which circumstance induces me to put in force, *simultaneously,* different means of reducing the phlogistic diathesis." On the other hand, he deprecates the subtraction of so many pounds of blood in this disease, when venesection may be so powerfully aided and greatly abridged by the use of antimony. He properly impresses it on practitioners that blood-letting is never to be dispensed with in this class of maladies, especially when they are severe, since the effects of this remedy are prompt and certain, where time is so precious;—whereas, it requires a certain period to elapse before the antimony produces its operation in checking the inflammatory process

Upon the whole, we think some advantage may be obtained by attending to the experience of the Italian physicians on this point of practice. The auxiliary aid of antimony has been too much despised by some modern practitioners in this country, in the treatment of internal inflammations, seduced by the powerful remedy which they possess in venesection, but which is not without its inconveniences, not to say dangers, when carried to a great extent.

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2. *Dissolution of Calculi by Galvanism.* As long as calculus in the bladder is a painful disease, and lithotomy a formidable operation, the ingenuity of man will be at work to find out the means of mitigating the one and superseding the other. The attempt of Messrs. Prevost and Dumas to solve the stone, while in the living bladder, by the action of the galvanic fluid, appears to us to be not a very promising experiment, as far as the human frame is concerned. We shall, however, give some account of the experiments of these very ingenious and zealous physiologists.

A fusible human calculus was submitted to the action of a galvanic pile, of 120 plates, for the space of twelve hours. The calculus was placed in a vessel of pure water. The platinum wires, which served for poles, touched the opposite sides of the calculus. During the action of the battery the bases and phosphoric acid came to their respective poles, recombined, and the salt thus formed, precipitated to the bottom of the vessel in the form of a fine powder. Before the experiment, the calculus weighed 92 grains—after it 80 grains. The galvanism was continued till the end of sixteen hours, when the calculus presented only a friable mass, which was easily reduced into small crystalline bodies by the slightest pressure.

The result of this experiment naturally led to another, still more curious. A calculus was fixed on a sound, between two platinum conductors, and the apparatus introduced into the bladder of a dog, by means of an incision in the urethra under the pubic arch. The bladder was injected with warm water, which was prevented from returning. A battery of 135 plates was then brought to act on the wires. The animal was, at first, restless, but soon became quiet, and supported the action of the pile during an hour. The apparatus was cautiously withdrawn, and the calculus showed evident marks of decomposition. The experiment was then renewed and continued six days, one hour in the morning and one in the evening. By this time the calculus had become so friable that the experiment was obliged to be discontinued. It had lost in weight proportionately to the other calculus. The animal was now killed in order to examine the state of the bladder. Nothing remarkable could be discovered in this organ.

Our authors hope that means will be found out to apply the galvanic action to those calculi in the human bladder which are composed of saline principles—but they are aware that it would be quite useless to hope for any beneficial result in cases where the calculus consists wholly or principally of uric acid.

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3. *Sulphate of Quinine in Infantile Erysipelas.* In the 3d number (New Series) of the Repository, Mr. Miles has stated a severe case of erysipelas phlegmonodes in a child, which was treated with sulphate of quinine. The child was only three weeks old, when a blush of inflammation was observed on the right side of the neck which extended by the following morning across to the opposite side, and downwards over a portion of the breast, assuming the phlegmonoid character. In a few days the whole surface was affected, with some sloughy appearances, especially about the trunk, and considerable œdema in the extremities. From extreme irritation the infant became convulsed. The subcarbonate of ammonia was tried, with extract of bark, for four days, but it had no control over the disease, and the stomach began to reject it. The sulphate of quinine was substituted, half a grain four times a day. This, Mr. Miles thinks, "supported the system in a surprising degree, and prevented, in all probability, the supervention of extensive sphacelation." Suppuration of the cellular membrane about the shoulders of the child afterward took place, but the infant ultimately recovered.

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4. *Porrigo Galeata, or Scald Head.* Banyer's ointment is strongly recommended for the cure of this disagreeable complaint by several practitioners, and lately by Mr. Sprague. The following is its composition.

℞ Submur. hydrarg. - - - ʒij.
Aluminis exsiccat. - - -
Plumbi subcarb. - - - āā ℥ss.
Terebinth. venet. - - - ʒvi.
Cerat. Cetacei - - - ℥iss.
Misce fiat unguentum.

Dr. Chapman employs the following application:—

℞. Sulphuris sublimat. - -
Unguenti picis liq. - - āā ʒiss.
Saponis mollis - -
Ammoniæ muriatis - - āā ʒss.
Misce fiat unguentum.

Vide Sprague in Med. Repos.

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5. *Colchicum.* Dr. Kinglake has lately favoured the public with some speculations "on the medicinal properties of colchicum," in which

we observe much that appears to us obscure, and something not entirely free from error. He seems to view the agency of colchicum on the human frame as quite similar to that of digitalis, hyoscyamus, cicuta, belladonna, and "other kindred articles"—that is, he considers it merely as a *narcotic*, "impairing the natural tone and *healthy* condition of nervous sensibility," without removing the *cause* of pain. Now, in the first place, we cannot, bring ourselves to view colchicum as a mere narcotic, seeing that it does not (at least very rarely does) remove pain at all at the beginning of its exhibition, but only after it has produced some evacuation from the system, by the skin, kidneys, or bowels. Is this the case with the other narcotics above mentioned? Surely not. *They* will indeed lessen the sensibility of the nerves to pain, without removing the cause, which generally acts with greater force after the operation of the anodyne. But let us bring the agency of the medicine to a familiar and practical test. A man has gout in his foot, which is swelled, red, and painful. He takes a few doses of colchicum, and the pain, together with the inflammation, vanishes, generally after some increase of the natural secretions or excretions. Is this a mere "state of negative sensibility" rather "than a positive removal of morbid pain?" Will any unbiassed observer deny that, in the case above mentioned, which is an every-day occurrence, the cause (inflammation) of the pain is removed along with the pain itself? The comparison therefore, of colchicum with the common narcotics, appears most forced, unnatural, and erroneous. Indeed we do not see the propriety of ranking digitalis and belladonna together as if they were both mere narcotics. Surely it is a perversion of observation to view digitalis simply as a narcotic. If Dr. Kinglake had a pain in his bowels, would he take a dose of digitalis on the same principle and with the same expectation as he would a grain of opium or five grains of hyoscyamus? We rather think that the Doctor's lucubrations on paper would harmonize badly with his practice at the bed-side in such a case. The fact is, that every individual medicine has a peculiar or specific effect on the animal economy—and that no two, even of the purest narcotics, have a precisely similar physiological action. Will any man of practical observation say that the action of opium and henbane is the same? Both, it is true, will ease pain; but they have various other properties entirely opposed to each other. As for digitalis, we really do not know a single property which it has in common with the narcotics among which it is ranked by Dr. K., when taken in proper doses. An ounce of tincture of digitalis will kill a man, and so will an ounce of laudanum; but this is not, we would imagine, the way to classify medicines. If so, sulphuric acid, arsenic, and almost every potent medicine may be ranked as *narcotics*, if taken in doses to produce the final sleep.

In one view of the following position, we believe, no man will venture to disagree with Dr. Kinglake. "Painful sensation is commonly rather an *effect* than the cause of disease." Sensation of every kind, painful or pleasurable, must be the *effect* of some impression on the nervous structure; but, after being an *effect*, it may itself become a *cause* of disease. Pain may and does derange the functions of circulation, digestion, and secretion—in short, what function does it not disturb, when excessive ? Dr. Kinglake appears to view the narcotic action of colchicum as consisting in its power " of reducing inordinate vascular action, by which the sensorial principle of life is painfully agitated." If this be its modus operandi in relieving pain, then Dr. Kinglake's objection to it must apply also to blood-letting, purging, nay, even to his own favourite remedy of cold water.

Be it remembered, that we are not here advocating the treatment of gout by colchicum ; but only making some observations on Dr. Kinglake's physiological principles, as explanatory of the modus agendi of the medicine. We have long been of opinion that the *causes* of gout are deeply laid in the constitution, and that the *phenomena* of gout in the extremities are no other than salutary operations to remove or obviate these causes. These salutary operations of Nature, like many other of her salutary operations, require to be controlled occasionally. But when they are suddenly and often interfered with, whether by colchicum, cold, or any other powerful means, the effects will be, sooner or later, injurious, if not fatal. In the following sentiments we agree with our author. " Gouty and rheumatic excitement, as well as every other description of painful disease, should be brought within safe and tolerably quiet bounds by vascular depletion, diminished temperature, and a lowering unirritating diet, rather than by an agency such as colchicum affords." For some other good remarks on the exhibition of the medicine, we refer to the journal in which the paper is published.—*London Med. and Phys. Journal, March,* 1824.

6. *Muriate of Lime.* Dr. Carter, in his last valuable Hospital Report, recommends a solution of muriate of lime in cases of intestinal worms. In cases of ascarides and lumbrici, after the bowels are well cleared out, the medicine appears to Dr. Carter to be an excellent remedy. In two or three instances he has known it expel worms when purgatives had failed to do so.

7. *Sulphate of Quinine in Cephalalgia.* Mr. Bushell has related a case, in the March number of the London Medical and Physical Journal, where the sulphate of quinine proved successful in arresting a violent and obstinate cephalalgia, after almost every other medicine had been tried in vain. Among other things the carbonate of iron was fully exhibited under the care of Mr. Hutchinson. The patient was a butler in a family, 41 years of age, who became affected, for the first time, with headach in October, 1822. It was in June, 1823, that he came regularly under Mr. B.'s care. His symptoms then were, excruciating pain in the head, coming on in the evening, continuing during the night, preventing sleep entirely, and gradually receding towards morning. Sometimes, however, the pain would continue for days together without remission. The pain was accompanied by occasional acute stabs, or darts, from one side of the

head to the other, striking down the upper part of the spine, and in the direction of the inferior maxillary nerve, bearing some affinity to tic douloureux. During the severity of the paroxysms his eyes were suffused with tears, and ferrety, his face flushed, the scalp tender to the touch. In the intervals, his face was pale, pulse below 80, small and feeble, tongue foul, appetite bad, bowels irregular, motions dark and offensive.

Mercurial alteratives, purgatives, bitter tonics, gave temporary relief only. Then were tried, cupping, blisters, purgation, but in vain. Tonic aperients and colchicum appeared to remove the disease, but it soon returned as bad as ever. Cinchona, valerian, shared the same fate, and the carbonate of iron seemed to aggravate the complaint. He went to Sandgate, where Mr. Hutchinson (brother of Mr. H. of Southwell) administered the carbonate of iron extensively, after bleeding. But this ultimately failed. Mr. Bushell now administered the sulphate of quinine in doses of one grain and a half every three hours. The dose was augmented. In four days the headach was gone; but the countenance was flushed, and the pulse very hard. The medicine was lowered. In ten days the patient was quite well, and has continued so.

We have had occasion lately to exhibit this medicine in some severe cases of hemicrania, with entire success. We shall only glance at one or two cases. A gentleman, attended by Mr. Bampfield, laboured under violent periodical pain in the right eye, and that part of the forehead, which rendered him almost distracted during the paroxysms, which came on once and sometimes twice a day. He was leeched, purged, &c. but still the pain recurred without mitigation. We then determined to give the sulphate of quinine, and also Fowler's solution of arsenic. These put a stop to the disease in a few days, and no return took place. In the case of a lady at Kensington we had similar success. She, for several years past, has had annual attacks of hemicrania of the right side, attended with redness and lacrymation of that eye, which, in some attacks continued several weeks, especially when it was treated by purgatives, on the supposition of its being of gastric or hepatic origin. In the present attack, which was very violent, a smart purgative was first administered, and then a grain and a half of the sulphate ordered every six hours. Five drops of Fowler's solution was also taken thrice a day. In three days the paroxysms were rendered quite insignificant, and by the fifth day they ceased altogether, and did not return. Some instances have come to our knowledge, where drachm doses of the powder of valerian every four or six hours put a speedy termination to periodical hemicrania, after bark, arsenic, and many other medicines, had entirely failed.

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8. *Pulvis Antimonialis.* Dr. Hawkins, of Hitchin, made experiments with the pulvis antimonialis of the shops (some of which was procured from Apothecaries' Hall) carrying the dose as high as one drachm, without ever producing the slightest sensible effect on the

constitution, or any function of it. He consequently comes to the conclusion that the medicine, on which we often place much dependence, is totally inert. We can hardly come to this conclusion; at the same time we are much inclined to fear that there is some foundation for the scepticism of Dr. Hawkins. The pulvis antimonialis is so generally given in combination with other medicines—and when given alone, is so seldom productive of effect, that we do not much wonder at the delusion under which we have laboured as to its medicinal properties. The tartrite of antimony should, we think, be trusted to instead of the antimonial powder.—*Ed. Journal, No, 2, New Series.*

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9. *Cubebs in Gonorrhœa.* Dr. Crane, of Boston, Lincolnshire, has published some observations on the treatment of gonorrhœa by cubebs, in the last number of our Northern cotemporary. He observes, what is very true, that in most instances, the urine smells strongly after a few doses of the cubebs are taken—the discharge decreases—and the heat of urine is much relieved. It rather opens than confines the bowels—if otherwise, a few grains of blue pill, at bed time, will be proper, with a saline aperient in the morning. This medicine generally improves the appetite and exhilarates the spirits. In two cases, it produced irritation and mental anxiety. Small doses, he thinks, are of no service: the powder must be taken "in doses of from two to three drnchms each, three or four times a day." In this we cannot agree with our author. Within the last month we have completely cured two cases of smart gonorrhœa by drachm doses thrice a day. In fact, the powder is so light and bulky that two or three drachms are not easily got down. Cold water is as good a vehicle as any. When the gonorrhœa is removed, the cubebs should be continued for ten days or a fortnight, gradually diminishing the dose. Sometimes a thin bluish coloured gleet, in small quantity, remains and cannot be removed by a continuance of the cubebs. In these cases, a weak solution of the sulphate of zinc injected twice or thrice a day, will prove efficient. Our author remarks, that if no good effect be produced by the cubebs in eight or ten days, it will be useless to continue the remedy. A combination of balsam copaiba is an exceedingly nauseous medicine, in Dr. Crane's opinion. We have found it useful, on several occasions, to exhibit the balsam as well as the cubebs in gonorrhœa, which is one of the most troublesome complaints which the medical practitioner has to deal with. The balsam is best borne at night going to bed in the dose of a good sized teaspoonful. The cubebs may be taken through the day. In all cases, we find low living and quietude hasten the cure.

Cubebs in Chronic Rheumatism. Accident led Dr. Crane to employ cubebs in this almost incurable complaint. In a few instances it proved beneficial—in others, it gave no relief. It must be continued for some time to produce effect.

10. *Ammonia in Drunkenness.* We know not whether the discovery of a medicine, which could dissipate the effects of spirituous or vinous potations, would be desirable, in a general point of view. That it might save the lives of some, and the characters of many, annually, there can be no doubt—but that the knowledge of a specific of this kind would lessen the terrors and consequently increase the practice of inebriety, we are also confident. Within the last few years the liquor ammoniæ has been reported by some continental physicians as possessing the power of quickly bringing an intoxicated man to his senses. Further experience, however, has not tended to confirm this statement. Mr. Chevalier, of Paris, has recently published some cases showing the total inefficacy of the ammonia, while a few others rendered it probable that the medicine had considerable effect in dissipating the vinous hallucination. What the circumstances are, which render the ammonia inert in one case and efficient in another, have not yet been ascertained. Sixteen or twenty drops of the liquor ammoniæ have been given as a dose, diluted in a wine glassful of water, and repeated pro re nata.

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11. *Treatment of Typhus Fever.* In the March number of our respected cotemporary, the Medical Repository, Messrs. Parkinson have recommended a plan of treatment in typhus fevers, somewhat different from any that have lately been proposed.* It bears the nearest analogy to the *gestation in the open air*, mentioned by Celsus, and put in practice by Dr. Jackson. Messrs. Parkinson are surgeons to a pauper institution, and their plan is as follows:—"Immediately on application for relief the patient is conveyed to the fever-ward. The body is then cleansed; and, if required, the warm bath is employed, the hair either thinned or entirely removed, and clean body linen with an upper clothing of woollen, put on. Bleeding, if required, is then employed; and an emetic or cathartic, if hitherto omitted, and now required, is had recourse to, the cathartic medicine being repeated as circumstances may require. A blister is applied to the nape of the neck, and in the neighbourhood of any part in which congestion is threatened. The patient is then seated in a chair with a railed back, so high as well to support the head whilst leaning backwards; the legs, if required, being supported horizontally at a convenient height, and he is then placed in the current of fresh air passing upwards from the windows and the lower parts of the building through the openings in the ceilings and roof. As the patients gain strength, they are allowed to change their situations either towards or from the windows; and, when able, which, in general is within two or three days, they are permitted to walk about the ward; but are very rarely allowed to lay on the bed in the daytime.

"The regimen is composed of tea, toast-water, barley-water, gruel, milk-pottage, and, as the tongue becomes clean, broth is added; but beer, wine, &c. are prohibited through the progress of the disease, and even of recovery.

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* It appears to have been recommended by the late Dr. Lettsom, in one of the volumes of the Medical Society's Memoirs.

"The beds and pillows, with a view to prevent the accumulation of heat about the head and trunk, are loosely filled with straw. The patients are requested to lay as much as they are able on their sides, and are required to quit their beds by nine o'clock of the morning. The advantages derivable from this arrangement, as well as from the exclusion of the patients from their beds during the daytime, will be perceived, on ascertaining, by interposing the hand between the back of the patient and the subjacent bed-clothes, the vast degree of heat which is there accumulated.

"The results from this mode of treatment have been extremely satisfactory. Direct amendment and speedy recovery have been obtained in a very large proportion of cases. Out of 187 patients, only five were lost: two of whom were between seventy and eighty years of age; two others were reduced to a hopeless state of weakness previous to their application; and one sunk from extensive sphacelations, induced by previous long-continued confinement to her bed.

"Such success excited the hope that, by avoiding stimulants, opening the bowels, keeping the patients in an *erect position, and allowing the free access of cold air*, the destructive powers of this malady might be effectually opposed. A longer trial has not only confirmed this hope, but made it appear to be a duty to make known the results in those cases in which it has been employed." 199.

Our authors observe, "that corresponding success is very seldom obtained when the attempt is made in the chambers of those who are surrounded by the luxuries or even the comforts of life." We object not to the cooling mode of treatment recommended above; but we confess we cannot see on what principle the utility of the upright posture can be explained. Coolness enough might be obtained without this; and whoever has laboured under fever must remember what distressing sensations and increased velocity of pulse are occasioned by the perpendicular posture. We bow, however, to the authority of *facts*, if experience shall prove them such in the hands of the many.

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12. *Stibiated Mercurial Ointment.* An Italian physician, (Dr. Miccoli,) avers, that, for *forty years* past, he has had the greatest success in practice, from using an ointment composed of one ounce of quicksilver, two drachms of lard or suet, and five scruples of antimonial powder. In the first place, he discovered that frictions with this ointment *never salivated*—a statement to which we are not disposed to give implicit credence—and in the second place, encouraged by this discovery, he used the ointment in dartrous affections, rheumatism, gout, obstructions, old ulcers, *phthisis*, ophthalmia, *impotence*, periodical diseases, congestions, cough, dropsy, asthma, tumours, &c. with the most happy effects, (les plus heureux effets.) It is difficult not to smile at such statements:—yet they are put forth

gravely, and copied by many of our continental cotemporaries. The ointment was rubbed on the thighs, groins, and armpits. He affirms that, in many instances, he prevented hydrophobia by these frictions!! Dr. Miccoli avers further, that crude mercury, triturated with antimonial powder, (poudre de Pearson) and administered in doses of from nine to twelve grains twice or thrice a day, produced the same effect as the pommade divine above mentioned.

Without putting much faith in the therapeutical statements of our author, we would be glad to know whether antimony in the above form has the power ascribed to it of preventing the mercurial influence on the system, as manifested by ptyalism. We know that combinations of mercury and antimony, *in other forms*, have the power of inducing salivation readily enough.

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13. *Contra Ptyalismum.* We all know that hitherto nothing has been found effectual in reducing the action of mercury on the salivary glands, when ptyalism has once taken place, but time. Neither do we think that a constitutional afflux of this kind could be checked, by external means at least, with safety to the patient. Solutions of the acetate of lead have been recommended as gargles. More recently Dr. Kreugerhausen, of Gostrow, affirms that he has, in many cases, quickly suppressed mercurial ptyalism by tar, taken into the mouth and diffused over the tongue and neighbouring parts. The remedy is not the most agreeable in taste; but we think it might be made more palatable in the form of gargles, should any practitioner be inclined to give it a trial.

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14. *Hospital Reports.* We are glad to see the medical officers of public institutions beginning to publish their Hospital Reports more generally than formerly. They would thus preserve them from those harpies who occasionally give to the public distorted representations of cases.

Dr. Chisholm has followed the example of his colleague Dr. Carter, in giving accounts, from time to time, of the prominent cases that come before him in the Kent and Canterbury Hospital. His first report is published in our respected cotemporary, the Medical Repository for March, and contains much interesting matter, which is, however, incapable of analysis. We can only glance at one or two subjects.

I. *Melena.* A man was admitted into the hospital, on the 27th June, 1823, with pain and sense of fulness in both hypochondria—debility,—stools frequent, pitchy, and generally mixed with dark grumous blood. Six drachms of oil of turpentine with half an ounce of oil of almonds were exhibited; while decoction and tincture of cinchona were administered through the day. Under this treatment he greatly improved, and was discharged cured. Our author observes, that he has been in the habit for many years past of giving turpentine in cases of melena (and some others) often in much larger doses than in this case, and he has found it a most valuable medicine.

II. *Colchicum in Case of Tape-Worm.* A respectable farmer had been afflicted with tape worm for ten years, and had tried, under various practitioners, the whole round of anthelmintics, with only temporary benefit. His farrier too, "had given him turpentine enough to kill a horse," but not sufficient to kill the worm. Having met with an instance where vinum colchici given for rheumatism expelled a quantity of tape-worm, Dr. Chisholm was induced to give it a trial in the present case. He therefore furnished the patient with two ounces of the wine (made according to Dr. Marcet's formula) desiring him to take a teaspoonful in a little water two or three times a day.* On the third or fourth day he passed a large quantity of the worm, and he continued to take the medicine for a week, but did not pass any more worm. He has now been free from the tapeworm more than three years. He took no medicine in the last instance but the colchicum.

15. *Lemon Juice in Scurvy.* It has long been known to many intelligent observers that salt provisions are not the only cause of scurvy—and that lemon juice is by no means an infallible cure for the disease, however induced, notwithstanding the evidence of Sir Gilbert Blane so positively advanced to the contrary. In support of our position we shall here bring forward an abstract from an official document of unquestioned authenticity and recent occurrence.

In the year 1822, His Majesty's ship Leander, sailed from Trincomalee for the Cape of Good Hope, taking on board the mechanics of the Dock Yard establishment then reduced on the island. There were also embarked twenty-six invalids and all the sick that could be removed from the hospital. These invalids and sick were principally affected with chronic hepatitis, dysentery, and phthisis pulmonalis, all of which (even some who were expectorating large quantities of purulent matter) recovered on the passage to the Cape. This good fortune was counterbalanced by scurvy, which broke out among the crew, and, in spite of large quantities of lemon juice plentifully administered, in conjunction with every other antiscorbutic which the ship could produce, spread to an alarming extent, and in one case proved fatal. Had they not reached the Cape at the time they did, the Leander would have presented as deplorable a spectacle as the Anson, at Juan Fernandez, notwithstanding the supposed infallible specific, *lemon juice*, which, in no instance, on board the Leander, had the slightest effect in even checking the ravages of scurvy. Immediately the ship reached the Cape, and the crew got plenty of fresh *animal food*, in conjunction with vegetables, they rapidly recovered.† Specimens of the lemon juice used were transmitted to the Victualling Board, and carefully analyzed in London. It was found to be perfectly good.

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* This dose is rather large. We would not advise such a quantity to be commonly prescribed. In the present instance there was probably less danger, as the farmer's bowels appear to have been pretty strong.

† See Mr. Bampfield's remarks also on this subject, in his valuable work on tropical dysentery.

V.

MIDWIFERY.

1. *Constipation in Pregnancy.* Nothing is more uncertain than the effect of constipation. One person will be in perfect health with only a single alvine evacuation weekly; while another will be quite unhinged if he pass many hours beyond the accustomed period of visiting the "MONT DE PIETE." Dr. Lemazurier has lately published a case, the prominent particulars of which we shall lay before our readers. He was sent for on the 8th July 1823, to see a woman in the seventh month of her third pregnancy. She had been of a costive habit from youth, and had abused the use of purgatives. For the three last months she might be said to have had no passage through her bowels—notwithstanding a milk and cooling diet. She had no fever—the tongue a little discoloured—the pulse and appetite feeble. After taking any solid food she was troubled with dyspnœa and general malaise. The abdomen was much distended—the motions of the fœtus very distinct—the transverse arch of the colon was felt greatly distended with an immense accumulation of fæces. The ascending colon and sigmoid flexure were in a similar state. There was no pain on pressure of the abdomen. This state of things caused dyspnœa, anxiety, sleeplessness, tendency to faintness, and pains in the loins. She had been bled before our author's visit. He therefore confined his prescriptions to milk diet, rigid abstinence from solid food, diluents, lavements, semicupia. These, as might be expected, proved totally useless; and it was determined to wait till the accouchement was over, before the evacuation of the bowels was attempted!. This event took place on the 11th of September, and a well-formed child was delivered without much trouble. The situation of the colon immediately changed, and took up a position near the pelvis. Symptoms of abdominal inflammation and irritation now came on, in addition to milk fever, which was developed on the 14th of the same month. Linseed tea, fomentations, leeches, and the warm bath, did not effect much. Nevertheless, by means of clysters, and other very gentle measures, the fæcal accumulation appeared to break up, and there was an evacuation of two or three pounds of hard, brown, and fetid matters. But there remained a collection too large for expulsion. The unhappy patient was worn down by nausea, fever, colicky pains, meteorism of the abdomen, retention of urine, procidentia vesicæ; and expired on the 21st of September.

Dissection. We shall pass over a number of minute particulars, in order to give only the essential pathological characters. The peritoneum was inflamed throughout its whole extent. There was a sero-purulent effusion in the cavity of the abdomen—false membranes over various portions of the intestines—some inflammation of the mucous membrane of the small intestines. The colon, from the cæcum to the rectum, was intensely inflamed, and its volume enlarged to a frightful extent. It was a foot in circumference, throughout the whole or nearly the whole of its length. It was filled with gas, and with 13½ pounds (French) of solid fæces!

It is doubtful whether any means would have been successful at the time Dr. Lemazurier visited the patient; but we question the propriety of waiting two months for the delivery of a child before an attempt was made to open the bowels of the mother. Surely, if the life of a parent be more valuable than that of a fœtus in utero, it would have been perfectly justifiable to procure premature delivery rather than allow fæces to accumulate for two additional months in the colon. When the physician was called in, this measure unquestionably presented more chance of saving the patient's life than the measure pursued by the Medical Adviser.

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2. *Rupture of the Fallopian Tube.* In the process of utero-gestation the quantity of blood supplied to the parts concerned, and the activity of the vessels there must be prodigious. Rupture of a very small vessel about the ovaries or fallopian tubes, in the early weeks of pregnancy, will cause immense and fatal hæmorrhage in a very short time.

Mr. Bushell, of Crawford-Street, has lately published a case of this kind in our cotemporary, the Medical and Physical Journal, of which we shall take a short notice. At 11 o'clock at night a pregnant female was suddenly seized with violent pain in the abdomen, and fainted away. On recovering a little she was placed in bed and appeared to be dying, in which state she continued till the morning. A practitioner had been sent for, but declined visiting the poor woman! We wish Mr. Bushell had given the name, for surely this was a most flagrant dereliction of duty. At 5 o'clock in the morning Mr. Bushell found the patient with hands and feet quite pale and cold—eyes glassy—great restlessness, but perfectly sensible. She could not bear the least pressure on the abdomen. Fomentations externally—stimulants internally. At 10, A.M. nearly in the same state. She expired about 12 o'clock.

This poor woman was of a lively and cheerful disposition naturally; but her husband's health and affairs being embarrassed, she stifled her griefs, while she consoled and supported the drooping spirits of her partner.

Dissection. Abdomen slightly tumid. When opened, an abundant flow of bloody serum now took place, to the amount of three pints at least. On turning up the intestines, a large mass of coagulum, about two pounds, was found in the pelvis. The aorta, vena cava, and other abdominal blood-vessels, being examined, no rupture could be found. The uterus was but slightly enlarged—not more so than in the first month of pregnancy. Os uteri blocked up with viscid mucus. The internal surface of the organ was turgid, with a muco-flocculent lining the incipient decidual membrane; there was also an increase of vascularity at each tubal aperture. The left fallopian tube and appurtenances were healthy, as was the *right*, for three-fourths of its fimbrial extremity. On inflation it was pervious, and had the appearance as if an ovum had very recently passed through it. The uterine termination was enlarged and nearly twice the size of the left fallopian tube at the same part. On the posterior aspect of this enlargement, a small, irregular, jagged hole was visible, which would barely admit the extremity of a probe. On tracing the tube towards the uterus, a vesicle, about half the size of a pea was discovered, and proved to be the ovum. The minute embryo, not larger than a small pearl barley, was perfectly distinct, floating in its liquor amnii. For several more minute particulars we refer to the original paper. We saw the recent preparation, and can vouch for the fidelity of Mr. Bushell's detail.

3. *Sloughing of the Bladder after Parturition.* As this is one of the most deplorable accidents which can follow delivery, and is rarely cured, it is desirable to give every publicity to successful issues. Mr. James Guthrie, of Kilmarnock, has lately recorded an instance of this kind.

Mrs. Campbell, aged 23, had been three days in labour, of a first child, before delivery was effected—and that ultimately by means of the forceps. In the early stages of parturition she made water frequently, but towards the end, a total retention took place, nor could the catheter be introduced. On visiting the patient next day, she complained of an excessive discharge from the vagina, with pain and tenderness of the external parts. She had discharged her urine about an hour after delivery, but had no power of retaining it since. Symptoms of an inflammatory nature now came on, requiring decided depletion, and when these symptoms subsided the melancholy fact of sloughing of the bladder was unequivocally ascertained. The situation of the aperture was about, or rather above the cervix vesicæ —its edges felt soft and irregular—and were painful to the touch. A piece of sponge was introduced into the vagina, as soon as the tenderness of the parts would admit, and applied in direct contact with the perforation in the bladder. A short elastic gum catheter was next passed into the urethra, and being fixed by suitable bandages, was allowed to remain there, in order to prevent any accumulation of urine in the bladder. In this way the edges of the aperture were brought into more immediate approximation. The report three days afterward was—"the urine flows entirely by the catheter; sponge completely prevents it from passing into the vagina; feels much more comfortable; considerable discharge of offensive matter from the vagina." Two days subsequently there was "excessive discharge of fetid matter from the vagina, with great pain and tenderness of the external parts, which are now in a state of ulceration—urethra very irritable. The sponge and catheter withdrawn, cleaned, and again introduced. In three days more the pain and tenderness so great that the sponge and catheter were again withdrawn by the patient herself. At this time an examination was made *per vaginam*, and the original aperture was found so greatly diminished, as scarcely to admit the point of the finger. With much persuasion, she again submitted to the introduction of the sponge and catheter, which, in three days more, were withdrawn to be cleaned. They were again replaced.

The above treatment was continued, with little variation, for a month, at the end of which time, the aperture in the bladder was completely shut up, by a soft but pretty firm cicatrix. The communication was thus entirely obliterated. She was examined five months afterward, and found perfectly free from complaint.

Mr. Guthrie is entitled to much credit for his perseverance in removing an affliction which renders life a horrible and loathsome evil, instead of a blessing and enjoyment.

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4. *Self-performed Cæsarean Section.* Some marvellous cases of this kind are on record—but though on record, are of very suspicious authenticity. Dr. Moseley has related the case of a negro woman in Jamaica, who performed the Cæsarean operation on herself, by cutting boldly through the uterus, and extracting a child from the left side of the abdomen. This operation was performed with a butcher's knife. The child died of lock-jaw, but the mother recovered. Extraordinary and incredible as this case may appear, it is more than equalled by a case recently published in our respected transatlantic cotemporary, the New-York Medical and Physical Journal, for March 1823. It is reported on the authority of more than one or two medical men. The *operator* was a young servant girl, "one fourth black," and only 14 years of age! while the family were at dinner, she went a little way from the house, and placed herself on a wreath of snow, where she was discovered by her master in the act of covering something with snow—which proved afterward to be a naked child. As soon as perceived "she immediately ran to the house with the second child hanging out at the wound, together with a considerable portion of her intestines." She was now surrounded by two medical men, Dr. Basset and another. A wound was found near the centre of the epigastric region, from which the second fœtus was extracted. This wound was four inches in length, extending in a diagonal direction, as respected the abdomen, about two inches above the umbilicus, with another incision, at nearly a right angle with the former, extending toward the sternum. The lower part of the abdomen was considerably distended with blood. This was first evacuated by changes of posture and gentle compression. The wound was then sewed up, and a bandage applied. She recovered. "I should judge, says the reporter, from the appearance of the blood upon the snow (there being three several places where she evidently stopped,) that the incision was made *immediately* preceding the rupture of the membranes, and that the first child was delivered *per vias naturales*, the third pain after the rupture."

The above case was reported to the Rensselaer Medical Society by Dr. Samuel M'Clellan, (who appears to have been the other physician in attendance) the president of the society, and by them forwarded to several of the American Journals. It is one of those extraordinary cases which we cannot easily believe, yet dare not positively deny.

5. *Pressure on the Perineum.* We some time ago threw out a hint of our scepticism respecting the efficacy of pressure on the perineum, as a preventive of rupture of that part in parturition. Dr. Campbell, of Edinburgh, has taken us to task on that point, but we urged our opinions no farther. We now see in the same journal through which Dr. Campbell's animadversions were made, a short paper from the pen of Mr. Thompson of Whitehaven, in which he seems to agree with us, that pressure on the perineum, in parturition, is more likely to cause than prevent laceration of that part. "It is possible that the force used may facilitate what it is meant to prevent; and the perineum, instead of being saved, be eventually torn." We certainly think it is reasonable to expect that, when a substance, soft in comparison, is placed between two bodies strongly opposed to each other, if there be a disposition to give way, it is the softest body that is likely to suffer. Our author strongly recommends the plan of Dr. Barlow (a gentleman of great experience) which is, to keep back the head, when it is advancing too rapidly, by the fingers applied to the head itself, and not to the perineum.—*Ed. Journal.*

6. *Sudden Parturition.* Every accoucheur in extensive practice must have met with cases of remarkably quick parturition. These cases are chiefly interesting in a forensic point of view, as the plea of sudden birth has been sometimes urged in behalf of an unfortunate mother accused of destroying her illegitimate offspring. Instances of this kind, well authenticated, should therefore be put on record, for the aid of medical witnesses. Mr. Tatham (*Med. Repos. April*) has related two cases of unusually rapid parturition. One was a clergyman's wife, who, while sitting in her parlour, the rest of the family being at chapel, was taken ill (in the 9th month of utero-gestation) and obliged to go to the night chair. A great discharge of water took place, followed immediately by twin children, which dropped into the utensil. An alarm was given, assistance obtained, and the children rescued from their cold watery bed. They died within the week. The other case was nearly similar. A woman felt three trifling pains, while sitting below stairs, but did not complain. In her passage to the bed-room a child was suddenly expelled, and fell on the floor of the lobby, bleeding profusely from the umbilical cord. By prompt assistance, Mr. Tatham saved both mother and child. In the first case it was the lady's first child—in the second, it was the fourth pregnancy.

VI.

MEDICAL JURISPRUDENCE.

1. *Leach* versus *Veitch.* It appears that Dr. Leach, late of the British Museum, had been afflicted with insanity, and placed under the care of Dr. Veitch, a regular physician, who, during the late war, had charge, under government, of naval lunatics at Hoxton and elsewhere.

He was therefore a person properly qualified to treat Dr. Leach, till proved otherwise. It appears, however, that during medical treatment, the patient, (who was kept in a cottage out of town) and some of his friends, conceived that unnecessary severity was exercised by Dr. Veitch's keeper, and improper remedies exhibited by himself. The patient was therefore removed from Dr. V.'s care, and an action was brought against him for the recovery of damages, on the above-mentioned two counts.

As far as we can judge from the evidence, as stated in the Medical Repository, for February last, neither of these charges was proved. The charge of cruelty was chiefly maintained by an *old woman*, who could not possibly have seen any of the transactions which she came forward to prove, and some discharged, and consequently malcontent servants, whose motives were more than questionable—or rather they were unquestionably bad. On this point, however, we shall not dwell, as Dr. Veitch's personal character was not involved, but only his *responsibility* for the acts of his servant.

In respect to the medical evidence brought forward to substantiate the charge of improper medical treatment on the part of Dr. Veitch, we must confess it does not altogether coincide with that liberality which we think one medical man should observe towards another, when called upon as a judge of actions and conduct which he did not witness, and therefore ought not to condemn, without knowing all the circumstances of the case, and all the indications which presented themselves to the former medical attendant. We shall give the two medical evidences, as stated in our cotemporary, leaving our readers to judge for themselves as to their ethical bearings. The first witness was Dr. Powell.

"He stated that when he saw Dr. Leach in July, 1822, soon after his removal from Dr. Veitch's, he found him in such a paralytic state as follows the use of mercury, and in a state of salivation; he thought him in extreme danger; he gave him *all the support he could* by nourishment and medicine. A *large* quantity of mercury would have produced the effect described, or a small quantity even on some constitutions. Being cross-examined, he admitted that he could not tell what had produced that state of the plaintiff's body—that exposure to cold, where no improper treatment had taken place, would produce the same effect. He further allowed, that if a patient were unwell in his body at the time he wanted to remove a mental malady, he would begin by eradicating the bodily disease; and if there was a liver complaint, he would take care to cure that before he made any other efforts." , 173.

We really were not aware that *paralysis* is a usual sequence or consequence of the internal use of mercury, whether exhibited for hepatitis (which was the case here) syphilis, or insanity. If Dr. Powell will please to refer to Dr. Burnett's paper in the Philosophical Transactions, and also in the last Number of this Journal, he will find as broad a scale of mercurialization as he can possibly desire, on board His Majesty's ship Triumph, of 74 guns, whose crew were salivated in the extreme—some of whom died of the salivation; and where even the sheep, pigs, goats, and poultry were mercurialized; yet no instance is related of paralysis following, as a consequence of salivation. So again, in India, where hundreds and thousands are annually salivated in hepatitis, dysentery, &c. we rarely or never see paralysis ensue. If, in certain trades, where men are long exposed to noxious mercurial vapours, we have paralytic affections, will any man of candour consider such cases analogous to that of a common administration of mercury in a hepatic affection? We cannot, then, but regard Dr. Powell's coupling paralysis with mercury, in the above evidence, as uncalled for in an ethical, and incorrect in a pathological point of view. Dr. Powell must be well aware that insanity is generally (we might say invariably) the consequence of *corporeal disease*, especially of the *brain*. Is not paralysis therefore more likely to result from this state of the sensorium than from mercury? We leave this question to the judgment of the profession at large.

After the *old woman* and the discarded servant, *Capper*, had given their evidence as to the *mala praxis* of Dr. Veitch, Dr. Sutherland was called forward.

"Then came Dr. Sutherland, who saw the plaintiff about the 14th June, 1822, in a very weak state of health, apparently proceeding from the extremely frequent use of mercury. He changed the mode of treatment, and gave strengthening medicines. He considered the mode of treatment, *described by the last witness*, as most improper; but, being cross-examined, he admitted that he did know the occasions on which the mercury was used, and could not therefore judge whether it was used improperly or not. The effect might have been produced on some constitutions even when used cautiously; and a short walk was very proper for persons in that state of health. Opening medicines were also necessary sometimes in these cases. Dr. Sutherland allowed Dr. Veitch to be a regular Physician." 173.

In this, as in the former evidence, we see the same apparent want of delicate feeling at the beginning—and the same admission of exceptions, enough to eat up the evidence in chief, on cross examination.

Our remarks are grounded, of course, on the *litera scripta* before us. If Dr. Powell and Dr. Sutherland considered the report of the case in the Repository as incorrect, it was their place to contradict it. Not having heard of any such contradiction, we are bound to believe the statement to be true. We shall now give the evidence of Mr. Wardrop.

"Mr. Wardrop had known the defendant about eighteen years, who has applied himself to the care of lunatic patients about ten years. When he saw Dr. Leach first, he was greatly irritated, and suffered under a disorder in the liver; and in complaints of that nature mercury is frequently employed. He thought mercury fit for the case of Dr. Leach; and it produced a gradual amendment. He left Dr. V.'s care quite sane. In five or six months he returned to the cottage. Witness there attended him professionally, and observed the same symptoms as on the former occasion. Being consulted as to the use of mercury, *he recommended it to be employed with considerable vigour.*

At this time the action of the liver was considerably deranged, and the mode of treatment adopted by the defendant was very judicious." 174.

The judge, in summing up, observed, that there was nothing imputable to Dr. Veitch himself, but only to his servant—thus completely absolving him from the charge of *mala praxis* brought forward by non-professional gossips, and, with shame and sorrow be it spoken, *countenanced* by the medical witnesses, who ought to have been the guardians of their brother practitioner's reputation! There were damages of 50 pounds awarded for "improper coercion."

An application was made for a new trial, with the view of falsifying the statements of the principal evidence, Capper; but from some legal informality the application failed. We shall conclude this article with one or two extracts from our respected cotemporary.

"Thirdly, the jury came to a decision, with which we cannot meddle—for that is matter of *law*—but as we shall take the liberty of meddling with the *physic* of the matter, we are disposed to say, that we cannot comprehend upon what evidence that decision was founded. We shall not suppose that the learned housemaid was their Pallas: perhaps it was Dr. Powell. This gentleman, however, did not see the patient until some days after he was removed from Dr. Veitch's care. At this time there was neither paralysis nor salivation, so that these must have come on after his removal. It was a great omission not to have asked the learned Doctor whether he had ever seen a case of insanity in which they made their appearance without the administration of mercury? We do not say that, if conscious of paralysis, and even salivation, belonging to the characteristics of this malady, he was bound *to volunteer* such a piece of information; but his evidence would have pleased us much better if he had, and we think would have been quite consistent with his own character as to the official appointment he holds. There are few points in forensic medicine more interesting than the nature and the manner of evidence as given by medical witnesses; and when the interests of the Profession, which are those of humanity as well as of science, are at stake in the person of a brother member, we should expect that men of enlarged and cultivated minds—men of liberal sentiments, and just views of the dignity of their own situation, would put out of sight any little considerations of rivalry or personal dislike, and speak of each other with the respect that is, at least, becoming." 176.

"With regard to Dr. Sutherland, his testimony corroborated the opinion of Dr. Powell, as to the impropriety of the plan of treatment. But this gentleman seems to have been truly unfortunate in the grounds of his opinion. It would appear as if he formed it from the details afforded by a servant—and that a discarded one. In his cross-examination, also, he admits exceptions enough to eat up his evidence in chief. It is with no small regret that we find ourselves compelled to animadvert upon the TESTIMONIAL deportment of men of some eminence; but it has been the fate of the *most eminent* occasionally to have given too much scope for animadversion on similar occasions; and we will seize the occasion to say to our younger brethren, that, to us, who are in the habit of looking at medical Practitioners in the situation of witnesses, with a scrutinising eye, they appear in a disadvantageous light when they allow most important and most manifest parts of the truth to be wrung from them by a cross-examination. We know that even professional men are summoned by one of the litigating parties with the view of favouring that side of the case; but such considerations ought to be the farthest from the candid and independent mind, especially when called upon for an opinion, and not for a statement of facts." 176.

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2. *Royal College of Surgeons.* The College has lately promulgated the following by-law, namely, that certificates of attendance at lectures on anatomy, physiology, the theory and practice of surgery, and of the performance of dissections, shall not be received by the Court, "*except from the appointed professors of anatomy and surgery in the Universities of Dublin, Edinburgh, Glasgow, and Aberdeen, or from persons teaching in a school, acknowledged by the medical establishment of one of the recognised hospitals, or from persons being physicians or surgeons to any of those hospitals.*"

This regulation has excited some sensation, and called forth, through certain channels of the press, much boisterous abuse and vociferous declamation. This mode of remonstrance is calculated, we conceive, to frustrate the object in view. For if the college rescind its regulation under a torrent of abuse, it will brand itself with the character of imbecility and timidity. We shall, therefore, make a few calm, and we hope impartial observations, on this by-law.

It affects, or at least interests, three classes of the profession—the old established lecturers, most of whom are attached to hospitals—the *aspirants* at future lectureships—and the pupils themselves. We say nothing of those who have been recognised lecturers hitherto, though not belonging to any hospitals, as Mr. Brookes, Mr. Carpue, Mr. Mayo, &c. because it is quite impossible that the above regulation can operate, in an *ex post facto* manner upon them.

In respect to the first and second classes, we think it is abundantly evident, that if private teachers continue to multiply in the manner they have lately done, a period will arrive, when the old-established, or hospital schools of anatomy must fall—and that principally on account of the difficulty of procuring subjects for dissection. It is quite impossible that they shall be able to cope with ten or twenty times their number of private teachers, whose zeal and industry will snatch away every subject that can be procured by the resurrection men. The question, then, seems to be, is this *commonwealth* of anatomical and surgical tuition preferable to a *monopoly* of it in the hands of hospital surgeons? We much fear that considerable evil and inconvenience will attend either state, if it come to be unrestricted on the one hand, or exclusive on the other.

Although there can be no doubt that simple anatomy and physiology may be as well taught by a young private lecturer as by the most experienced surgeon, yet it must be allowed, that morbid anatomy, and more especially surgery, will be best taught by the hospital surgeon: We should therefore greatly regret the decay or embarrassment of the hospital schools in this or any other city of the empire, through the operation of *multiplied* private teachers. At the same time, we think that the law in question, which, if put in rigid force, must go far to annihilate private lectures in anatomy and surgery, is one of great severity, and which nothing but urgent necessity should call into operation. It certainly shuts the door on merit, unless that merit be conjoined with good fortune and strong friends. Nor do we think it will be of *ultimate* advantage to the hospital teachers themselves. No principle of decay is more certain or fatal than that which results from security of monopoly. To withdraw *competition* from any pursuit or undertaking, moral or physical, is to sap the foundation, of human energy, and foster indolence. In fine, *monopoly* must ever prove an antidote or torpedo to *emulation*. The consequences are obvious.

The regulation in question will produce inconvenience, if not injury, to many of the third class—the students themselves. It confines their studies to certain prescribed channels, instead of giving them the range of the world to acquire knowledge, where and how they please. By the existing laws the student must be three years—or three winters, (which is tantamount,) in one or more of the above-mentioned schools; whereas, we think that, considering the difficulties thrown in the way of practical anatomy in this country, one of those winters ought to be allowed on the Continent, where bodies are so readily procured and dissections so easily prosecuted.

It appears hard, also, that our large provincial hospitals, as those of Bath, Bristol, Liverpool, Leeds, Norwich, &c. should be excluded from the privilege of conferring hospital time for attendance on them, while that privilege is granted to Aberdeen, the scanty population of which can never supply much field for hospital practice. To this it is answered that, in Aberdeen, there is a regular anatomical chair, without which, attendance on an hospital would, it is said, be worse than useless. How far elementary anatomy is taught in any of the provincial hospitals we know not, and therefore cannot comment on the objection made to the want of an anatomical chair.

We have now set the question before our readers, in as impartial a manner as we can. We have no private interest or feeling in the result—and only wish that the good of medical science itself may be consulted by those who agitate the question. In the above reflections we do not hope to please either side—because we think that impossible, without embracing, exclusively, the views of one or other party. We consider it our duty to allay rather than excite hostile and angry feelings in the profession. Those who fan the flame of discord, on such occasions, have too often a *selfish* motive at the bottom.

3. *Nisbet* VERSUS *Parsons.* To most of our readers the name of Nisbet will be familiar. Many a character has he sustained, or rather assumed, through life, and he is now, it seems, greatly in want of a *new* one. He accordingly tried to *recover* one, by law, in an action lately brought against Mr. Parsons of Camberwell. He did not succeed. He will probably take to his old trade of literary hack to the booksellers, for whom he drudged many a year, with the motto on his back—

> Sic vos non vobis fertis aratra boves.

It appears that a "MEDICAL BOARD" had been established at Kennington, under the superintendence of Dr. alias *Surgeon* Nisbet and Co. his colleague being a half-pay captain. Under this Board was placed a wounded boy by his ignorant parents. But a gentleman (who was to pay the bill) thought proper to send the family surgeon (Mr. Parsons) to see if all was going on right. Mr. Parsons did not approve of the surgical treatment pursued by the Board, and pretty freely exposed their bungling practice. This enraged the head of the Board, and an action was brought against Mr. Parsons, evidently with the view of gaining notoriety with a verdict, of which he made sure. But, alas! the glorious uncertainty of the law! When the Doctor was called on to produce his diploma, as a surgeon, he could only produce the evidence of Dr. Walshman, which evidence went to prove that Dr. Walshman knew Dr. Nisbet for twenty years—but in what character Dr. W. was quite unable to say! The action, of course, fell to the ground, and the "Medical Board" of Kennington Common has probably, by this time, bowed to the same fate. Sic transit gloria mundi!

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4. *Apothecaries' Act.* A trial came on at York lately, in which a surgeon-apothecary sued a family whom he had cured of the itch. The whole bill only amounted to five or six pounds. The plaintiff was proved to be a regular surgeon, and had been in practice for some years previous to 1814; but in that year he had embarked on board a vessel as surgeon. He was consequently *not practising on terra firma on the 1st day of August*, 1815. He returned after the act had passed, and it was in his subsequent practice that the subject of dispute arose. He was non-suited, because he was not actually practising on the identical day on which the act became law!! We consider this as a most disgraceful quibble, subversive of justice, and, in fact, contrary both to the letter and spirit of the act itself, which says—"in practice as an apothecary prior to, *or on* the said first day of August, 1815." If it had been "prior to *and* on the day," in question, it would have been a different thing.

XIV.

BIBLIOGRAPHICAL RECORD;

OR,

*Works received for Review since last Quarter.**

**** The first five works on the following record came too late last quarter, and were only entered as a postscript in the advertising sheet. They are now regularly entered in the record.*

1. Observations on Vaccination, and on the Practice of Inoculating for the Small-pox. With an Appendix of Cases and Facts. By John Conolly, M.D. Physician to the Stratford Dispensary, &c. Octavo, sewed, pp. 76. Price 3s. London, 1824.

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2. Nugæ Chirurgicæ; or a Biographical Miscellany, illustrative of a Collection of Professional Portraits. By **William Wadd**, Esq. F.L.S. Surgeon Extraordinary to the King, Fellow of the Royal College of Surgeons of London, &c. Octavo, pp. 276. London, 1824.

*** *Mr. Wadd possesses a very respectable collection of medical portraits; and this work is a kind of catalogue raisonnee of the originals. We shall probably notice some of the biographical sketches in the Review department.*

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3. A Course of Lectures on Chymical Science, as delivered at the Surry Institution. By Goldsworthy Gurney. Octavo, pp. 310, eight plates, price 13s. boards. 1824.

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4. A Letter from Goldsworthy Gurney, author of "Lectures on Chymical Science," to W. J. Brande, Esq. Professor of Chymistry at the Royal Institution, on a late Review of Mr. Gurney's Work, in the Quarterly Journal of Science, &c." Octavo, sewed, pp. 22. 1824. Price 1s. sewed.

*** *In this Letter Mr. Gurney complains bitterly of the injustice, &c. of a review in Mr. Brande's Journal—but which review he does not impute to the pen of Mr. Brande himself. We must refer to the journal and the reply for the various* coups *and* contre-coups *which have been given and returned in this literary or rather* scientific *sparring match.*

Non nostrum inter vos, &c. &c.

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5. The Animal Kingdom, arranged in conformity with its Organization by the Baron Cuvier, &c. &c. &c. With additional Descriptions of all the Species hitherto named—of many not before noticed; and other original matter. By Edward Griffith, F.L.S. and others. Octavo, pp. 203, with 18 plates, price 15s.—to be continued quarterly.

*** *This is the cheapest and most valuable work of the kind in any language. The plates alone are worth the money. Besides the original matter, it will form a complete translation of Cuvier's Work, (4 volumes in the original,) which has never been in an English dress before.*

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* Note.—Authors and publishers will readily appreciate the importance of having their works recorded, with full length titles, on this list, which stands as a perpetual advertisement so long as the Journal lasts, and as far as it extends. The republication of the Journal in America enhances the advantages of the Bibliographical Record, on which no work can be entered, unless transmitted, free of expense, to the Editor, under sealed cover to the publishers, or in any other way most convenient to the parties concerned.

6. Elements of Medical Jurisprudence. By Theodoric Romeyn Beck, M.D. Professor of the Institutes of Medicine, &c. &c. in the College of Physicians and Surgeons of the Western District of the State of New-York. In two volumes, 8vo. Albany, 1823.

⁎ *This is really a very valuable compilation, and does great credit to the judgment and research of the author. We shall notice it frequently in our forensic department.*

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7. An Inquiry into the Causes of the Curvatures of the Spine, with Suggestions as to the best means of preventing, or, when formed, removing the Lateral Curvature. By T. Jarrold, M.D. 8vo. pp. 147, two plates, London, 1824.

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8. An Essay on the Blood, comprehending the chief circumstances which influence its Coagulation; the Nature of the Buffy Coat; with a concise Medical View of the State of the Blood in Disease; and an Account of the Powers of a Saturated Solution of Alum as a Styptic Remedy in Hæmorrhage. By Charles Scudamore, M.D. F.R.S. Member of the College of Physicians in London, &c. &c. &c. 8vo. pp. 162. London, March, 1824.

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9. Dissertatio Medica Inauguralis de Rabie Canina. By James Lomax Bardsley, M.D. Late President of the Royal Medical Society of Edinburgh, and one of the Physicians to the Manchester Infirmary, &c. Edinburgh, 1823.

⁎ *This Essay contains most of what is known on the subject, besides two original cases, with dissections. These last will be noticed in our Periscope.*

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10. An Attempt to Explain, on Natural Principles, the Cures alleged to be Miraculous, of Miss Lalor and Mrs. Stuart. With an Appendix, containing Cases and Illustrations. By a Physician. 8vo. sewed, pp. 28, Dublin, 1824.

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11. A Treatise on Syphilis; exhibiting the Advantages of Large Doses of Submuriate of Mercury in the Cure of that Disease. Also an Inquiry into the Modus Operandi of Mercury. Illustrated by experiments. By James Boyle, Esq. one of the Surgeons to the United Institution of London and Westminster for the Treatment of Lying-in Women and Children; Author of a Treatise on the Epidemic Cholera of India, &c. 8vo. pp. 166, price 6s. boards. London, March, 1824.

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12. Thoughts on Prison Labour, &c. By a Student of the Inner Temple. 8vo. pp. 348. London, 1824.

A Letter on the Nature and Effects of the Tread-Wheel, as an Instrument of Prison Labour and Punishment, addressed to the Right Honourable Robert Peel, M.P. By a Magistrate of the County of Surrey. 8vo. sewed, pp. 174. London, 1824.

A Second Letter to Sir John Cox Hippesley, Bart. on the Mischiefs Incidental to the Tread-Wheel as an Instrument of Prison-discipline; containing an Examination of the Official Reports upon this Subject, returned to the Secretary of State's Office during the present Session of Parliament. By John Mason Good, M.D. F.R.S.

⁎ *From the conflicting testimonies that have been published respecting the* Physiology and Pathology *of the Tread-Mill, we cannot come to any positive decision; and we are not much inclined to gather our knowledge, on the present oc-*

casion, from personal experience. *We much doubt whether the Tread-Mill will ever give* entire satisfaction *to the* ladies and gentlemen *who honour it with their patronage. Custom, however, is almost omnipotent. We know what it does for the eels, when skinned alive—and Goldsmith in his Traveller (travellers are allowed some license) has assured us that—in Switzerland at least—*

"*The rocks* by custom *turn to beds of down.*"

For our own parts we are much inclined to coincide with Mr. Peel, when he prescribes change of air *from St. James's Street, to Brixton, and change of Employment from the Wheel of Fortune to the* Tread-*Wheel.*

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13. Symptomatology; or the Art of Detecting Disease: a Lecture occasionally read to the Pupils at the Westminister Hospital, and published according to their request. By A. P. Buchan, M.D. F.L.S. Late Physician to that Institution. To which are added, Tables of Symptoms. 8vo. pp. 190. London, April, 1824.

⁂ *The Table of Symptoms is chiefly copied from the symptomatology of Berkenhout, with additions from Hippocrates and others, as well as from the author himself. We shall notice this work shortly, we hope with some approbation.*

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14. Recherches sur les Propriétés Medicinales et L'Emploi en Medecine de L'Huile de Croton Tiglium, et quelques propositions sur les Maladies de L'Inde. These presentée et Soutenue à la Faculté de Medecine de Paris, le 2d Fevrier, 1824; Par W. E. E. Conwell, de Londonderry (Irlande) Docteur en Medecine de la Faculté de Paris. Membre du College Royal de Chirurgiens à Londres, &c. &c. Quarto, pp. 26. Paris, 1824.

⁂ *In this thesis the medicinal properties and best modes of administering croton oil are detailed; but they are now well known in England. At the end of the thesis are four propositions on the diseases of India, occupying only one page. The first proposition is worth insertion here.* "*In the space of* 15 *years, I have not met with a single case of idiopathic phthisis pulmonalis in India. In that space of time, I observed about seven or eight cases of phthisis occasioned secondarily by affections of the liver.*"

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15. A System of Anatomical Plates; accompanied with descriptions and Physiological, Pathological and Surgical Observations. By John Lizars, F.R.S. Fellow of the Royal College of Surgeons, and Lecturer on Anatomy and Physiology, Ed. Part IV. The Muscles of the Trunk. Price 10s. 6d. Plates and Letter-press.

⁂ *We anticipated the success of this work, and are happy to find our anticipations fulfilled. We have only to say to the able and indefatigable author—* PERGE PEDE QUO CÆPISTI.

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16. An Appeal to the Public and to the Legislature, on the Necessity of Affording Dead Bodies to the Schools of Anatomy, by Legislative Enactment. By William Mackenzie, Andersonean Professor of Anatomy and Surgery in the University of Glasgow, &c. 8vo. sewed, pp. 36, Glasgow, 1824.

⁂ *This is a well written pamphlet, of which we shall take some notice in another place. We wish this appeal could be made known to the community at large, and to the legislature in particular, in whom the power of remedying the evil essentially resides.*

17. The Apothecaries' Chart; showing, at one View, the Formulæ of all the Preparations in the London Pharmacopœia of 1824, usually made up by the Apothecary or Retail Druggist:—with Tables of the Weights and Measures; the quantity of Opium, Mercury, &c. contained in Particular Compounds; and a Vocabulary of the Words and Contractions used in the Chart. By a Retail Chymist and Druggist. One large sheet, price 2s. 6d. London 1824.

⁂ *This is an extremely useful sheet to hang up in the shop or surgery alongside of Stowe's Toxicological Chart. The author deserves great credit for the ingenious idea.*

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18. The Chymical Decompositions of the Pharmacopœia Collegii Regalis, Medicorum Londinensis, 1824. To which are added, Tables of the Materia Medica, intended for the Use of Students preparing for their Examinations at Apothecaries' Hall. By JONATHAN PAREIRA, Fellow of the Medical, and Member of the Meteorological Societies of London, Apothecary to the General Dispensary, &c. Octodecimo, pp. 43. Price 1s. 6d.

⁂ *We do not know any better way of explaining the nature of this little pocket book than by giving a single specimen—selected more on account of its conciseness than for any other reason.*

"SPIRITUS AMMONIÆ."

"There is here also a double decomposition; Muriate of Potas and Subcarbonate of Ammonia being formed, the latter is volatilised, and dissolved in the spirit." p. 23.

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19. A Treatise on Stricture of the Urethra; designed as a Manual for the Treatment of that Complaint; and addressed chiefly to Students and Junior Practitioners. By GEORGE MACILWAIN, Member of the Royal College of Surgeons, Surgeon to the Finsbury Dispensary, &c. 8vo. pp. 138, price 6s. boards. London, 1824.

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20. Lettera del Dottore Giacomo Clark, al Professore Giacomo Tommasini Inlarno alla Letterature Medica Inglese. 8vo. pp. 47. Roma, Decembre, 1823.

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21. The New-York Medical and Physical Journal, Numbers 1 to 5 inclusive, for 1822, and first quarter of 1823. Published quarterly, and edited by Dr. JOHN W. FRANCIS and Dr. JOHN B. BECK, of New-York.

⁂ *This Journal is on the plan of our respected cotemporary of Edinburgh, though on a much smaller scale, and appears to be conducted in a very respectable and independent manner. We wish the Editors every success. We did not receive Dr. Francis's letter of May 31st, 1823, till the 15th April, 1824. The following extract from Dr. F.'s will give some idea of the mental activity of our New-York brethren.*

"The republication of the MEDICO-CHIRURGICAL REVIEW in this city is highly encouraged; and when I add that, besides six other American periodical works, on medicine and the collateral branches, arrangements are making for republishing the MEDICO-CHIRURGICAL TRANSACTIONS, I need not give you a stronger evidence of the zeal of the medical profession among us."

N. B.—*We have forwarded the last Number of the Analytical Series, through Mr. Millar of New Bridge Street in this metropolis, a liberal and obliging bookseller; and shall transmit to Dr. Francis the new series as it appears.*

22. An Account of the Yellow Fever, as it prevailed in the City of New-York, in the Summer and Autumn of 1822. By **Peter S. Townsend**, M.D. &c. 8vo. pp. 383.

*** *Dr. Townsend appears to have been a careful observer, and thinks himself authorized by unequivocal facts, to conclude that the fever was imported from the West Indies, and that it was of a decidedly contagious character. Almost the only points on which the physicians of New-York agree, are the fatality of the disease, and the little power which any mode of treatment had over it!*

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23. Section of the Leg, forming part of a Series of Engravings designed as Practical Illustrations of the Surgical Anatomy of the Blood-Vessels, Nerves, &c. relating to Amputation. By **Thomas Alcock**, Surgeon. One large sheet, with explanations, references, plans, &c. March, 1824.

*** *This first plate represents, in a most accurate and luminous manner, the face of a stump, when the limb is just severed below the knee. All the muscles, bones, arteries, veins, and nerves, together with the septa between the muscles, are delineated with the greatest fidelity, the parts being of the natural dimensions. We need not say more to recommend it to the student who means to fit himself for the operation in question.*—See Extra Limites.

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24. Bulletin des Sciences Medicales. Troisieme Section du Bulletin Universel des Sciences. Publiée sur la Direction de M. Le **Baron de Ferussac**. Numbers 1, 2, 3, for January, February, and March, 1824. 96 pages each number. (In exchange for Med. Chir. Review.)

*** *This is a very meritorious production. It is a universal medical Intelligencer, remarkably well executed.*

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25. Saggio Sull' Iodia E Sulle differenti sue Combinazione E Preparazioni Farmaceutiche Giusta I Risultamenti che se ne sono ottenuti Nell' Votituto. Clinico-Medico dell' J. R. Universitata di Padova. 8vo. pp. 120, Padova, 1822.

*** *Very creditable to the industry, talent and zeal of the Clinical School of Padua, at the head of which is the illustrious Brera.*

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26. De Medicis Virtutibus quibus Gaudet Croton Tiglium, ejusque precipue Oleum. Dissertatio inauguralis, &c. Auctore **Leo Vita Finzi**, ex reparolo Provinciæ Mantuanæ. 8vo. Padua, 1823.

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27. A Probationary Essay on Cancer; submitted by authority of the President and his Council to the examination of the Royal College of Surgeons of Edinburgh when Candidate for admission into their body. By **George Johnston**, M.D. Surgeon; Extraordinary Member of the Royal Medical Society, &c. 8vo. pp. 58. Ed. March, 1824.

*** *This little Essay concentrates most of what is known in the pathology or useful in the treatment of that dreadful disease. Dr. J. exhibits a very fair stock of information on the subject, and acquaintance with the best writers on cancer.*

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28. The New London Dispensatory, containing a translation of the Pharmacopœia Londinensis of 1824; with the Medical, Natural, and Pharmaceu

tical History of the Articles in the Materia Medica; the modes of preparing Morphia, Cinchonine, and the other recently discovered Alkaloids; and an explanation of the chymical decompositions, &c. arranged according to a new method. With an appendix, giving an account of Iodine, Hydrocyanic Acid, &c. By THOMAS COX, M. D. *Ed.* &c. 8vo. pp. 352, 10s. 6d. bds. 1824.

⁂ *The title page sufficiently explains the scope and tendency of the work.*

29. Formulary for the Preparation and Mode of Employing Several New Remedies, &c. by the late THOMAS HADEN, Esq. *Second Edition*, with numerous alterations and additions. BY ROBLEY DUNGLISON, M. D. &c. 8vo. pp. 150. London, May, 1824.

⁂ *This second edition (as will be obvious enough from the position of our second article) reached us long after the review of the first edition was printed off. We have only room to say that Dr. Dunglison has greatly improved the work of his deceased friend. We recommend the publication strongly.*

30. The Edinburgh Medical and Surgical Journal, No. 2, New Series, for April, 1824, price 6s. (In Exchange for Medico-Chirurgical Review.)

31. Medical Report of the Fever Hospital and House of Recovery, Cork-Street, Dublin, for the Year 1823. By WILLIAM STOKER, M. D. Senior Physician to that Hospital, &c. 8vo. pp. 102. Dublin, April, 1824.

32. A Short Treatise on the Section of the Prostate Gland in Lithotomy; with an Explanation of a Safe and Easy Method of Conducting the operation on the Principles of Cheselden. Illustrated by Engravings. By C. ASTON KEY, Surgeon to Guy's Hospital, and to the Magdalen. 4to. pp. 34, four plates, May, 1824.

⁂ *See the surgical division of our Periscope, page 206, et. seq.*

33. The Surgical Anatomy of the Arteries of the Human Body: designed for the Use of Students in the Dissecting-Room. By ROBERT HARRISON, A.B. T.C.D. Member of the Royal College of Surgeons in Ireland and London; and one of the Demonstrators of Anatomy in the School of Surgery in Dublin, &c. In two volumes small octavo. Vol. I. pp. 226. Dublin and London, May, 1824. Price 5s.

⁂ *This little work appears to be one of merit and utility. When we receive the second volume, we shall give some account of the publication to our readers.*

34. A Treatise on the Internal Use of the Natural and Factitious Waters of Carlsbad, Marienbad, Ems, &c. By Dr. F. KREYSIG, of Dresden, Physician to the King, &c. Translated from the German by GORDON THOMSON, M.D. 8vo. pp. 96. Highley, May, 1824.

⁂ *Dr. Struve, of Dresden, has established a manufactory of the above-mentioned waters at Brighton, where we hope they will be fairly and liberally tested as to heir correspondence with the celebrated native waters on the continent.*

35. The Medical and Surgical Register: consisting chiefly of Cases in the New-York Hospital. By JOHN WATTS, Jun. M.D. VALENTINE MOTT, M.D. and ALEXANDER STEVENS, M.D. Parts I. and II. 1818, and 1820. With several plates.

⁂ *Thanks to the able conductors of the above work.*

36. On the Nature and Symptoms of Cataract, and on the Cure of that Disease, in its Early Stages, by a Mode of Practice calculated to prevent the occurrence of Blindness, and to render unnecessary the Operations of Couching and Extraction. Illustrated by cases. By JOHN STEVENSON, Esq. Fellow of the Royal College of Surgeons, &c. 8vo. pp. 234. London, May, 1824.

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37. Engravings Illustrative of a Work on the Nature and Treatment of the Distortions to which the Spine and the Bones of the Chest are Subject. By JOHN SHAW, Surgeon, and Lecturer on Anatomy. Folio, pp. 47, of letter-press. 7 plates, and numerous sketches. London, May, 1823.

⁂ *We cannot too strongly recommend to our professional brethren the work, of which these plates and descriptions are illustrative. No surgeon should be without the book and plates, who wishes to have a comprehensive and accurate view of the nature, causes, and treatment of spinal diseases, now so prevalent in society. There is a great mass of important matter in the letter-press accompanying these beautiful engravings. We shall revert to the subject in our next number.*

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38. A Practical Treatise on Diseases of the Skin, comprehending an account of such Facts as have been recorded on these subjects, with Original Observations. The whole arranged with a View to Illustrate the Constitutional Causes of these Diseases, as well as their Local Characters. By SAMUEL PLUMBE, Member of the Royal College of Surgeons of London, of the Medico-Chirurgical Society, &c. London. Printed for Thomas and George Underwood, 32, Fleet-St. May, 1824.

XV.

INTELLIGENCE, CORRESPONDENCE, &c.

The analysis of Dr. Shearman's work on debility came safe to hand from *N.* It was too late for this number; it will certainly appear in our next.

The queries of a "young surgeon" respecting wounded arteries will be answered in our next.

Many thanks to ÆQUUS for his medico-legal communication. His letter is under consideration.

Mr. Butler, herbalist in Covent Garden, has lately imported a small quantity of the secale cornutum, (ergot of rye,) a specimen of which he has obligingly sent us. A trial may now be made of this curious medicinal substance by our obstetric brethren.

TYRO'S LETTER.

"SIR,—Will you have the goodness, in your next number, to explain how the tongue becomes furred, or to point out any author who explains the subject?

TYRO.

We consider the furring of the tongue as a morbid alteration in its glandular and papillary structure, or, at all events, a *morbid secretion* from its own surface, sympathetic of disorder in some other part of the body—generally of the stomach or bowels. "Toutes les fois," says Bichat, "qu'il y a embarras gastrique, la surface de l'estomac souffre, *par consequent la surface de la langue;* les glandes sur cette surface augmentent leur action, et de la cet enduit blanchatre et muqueux qui constitue ce que l'on appelle vulgairement *langue* *chargée*, qui offre un veritable *catarrhe sympathique*." We believe this is as good an explanation as can be given; but if Tyro wishes for longer dissertations on the subject, he may consult the "SEMEIOLOGIE" of M. Double—the "Traité du Prognostic" of Leroy—or last, not least, to Dr. Marshall Hall, on Diagnosis, p. 54, *et seq.*

Mr. Green's Lectures at the College of Surgeons.

Mr. Green's lectures at the College attracted a most crowded audience, and called forth enthusiastic plaudits, this year. The subject was highly favourable—being no less than a delineation of the structure, functions, and natural history of the whole of animated nature, from the minutest animalcula up to man himself. The present course ascended to the conclusion of the invertebrated animals. Mr. Green not only displayed an intimate acquaintance with every link in this immense chain, but elucidated each subject by means of beautiful magnified drawings, diagrams, and figures, in aid of the costly and numerous preparations preserved in the College Museum. Nothing could exceed the *matter* thus brought forward, except the *manner* in which it was delivered. The most abstruse points of physiology and anatomy were descanted on in an easy and flowing oratory that would have done honour to the senate or the bar. In fine, we have no hesitation in averring that, in point of elocution, Mr. Green is the first medical lecturer we have ever heard in this or in any other country.

MEDICATED OIL SILK.

Mr. Morange, from New-York, has established an extensive manufactury of medicated oil silk, in Middlesex Terrace, Hackney Road. We have had letters from several distinguished physicians in the United States, strongly recommending this manufacture, in cases of CHRONIC RHEUMATISM and GOUT, and we have seen documents to the same effect from Dr. Mitchill, Dr. Post, Dr. Hosack, Dr. Watts, Dr. Stevens, Dr. Pascalis, and several others. With such respectable vouchers, we have no doubt that Mr. Morange will meet with due encouragement in this metropolis.

LECTURES ANNOUNCED.

Dr. Ramadge, F. L. S. Fellow of the Royal College of Physicians, and Physician to the Infirmary for Diseases of the Lungs, &c. will commence his Summer Course of Lectures and Examinations on the Principles and Practice of Physic, Materia Medica, and General and Pharmaceutic Chymistry, at a quarter past Ten in the Morning of Monday, the 7th of June. Three Courses are delivered every Year; and for particulars apply to Dr. Ramadge, at his house, 21, Ely Place.

Dr. Dunglison, Consulting Physician-Accoucheur to the Eastern Dispensary, will commence a Course of Lectures on the Principles and Practice of Midwifery, &c. at the commencement of October next.

Dr. Copland will commence, about the end of September next, Courses of Lectures on the Principles of Pathology and the Practice of Medicine, and on the Materia Medica.

FOTHERGILLIAN MEDAL.

We are most happy to see the Fothergillian Medal, value 20 guineas, awarded to Mr. Bampfield, of Bedford Street, Covent Garden, by the Medical Society of London, for the best Treatise on Spinal Affections. We hope soon to see the subject laid before the public at large by the able and indefatigable author.

Army Medical Officers' Supplemental and Benevolent Fund Dinner, Ninth Anniversary.

The anniversary of this most excellent and praiseworthy institution was celebrated on the 14th of May, at the Thatched House Tavern, with great harmony, conviviality, and decorum. Sir James Fellowes was in the chair, supported on right and left by Sir Henry Halford, Mr. Cline, Dr. Cooke, Sir Everard Home, and numerous other distinguished members of the profession. Upwards of 80 gentlemen sat down to an excellent dinner, and we observed an unusual proportion of visiters, from the other liberal and learned professions. After the routine toasts were disposed of, the *special* ones commenced, and drew forth numerous and neat speeches from the individuals on whom devolved the duty of returning thanks. The College of Physicians and Surgeons being toasted, thanks were returned in very appropriate and eloquent speeches, by Sir Henry Halford and Mr. Cline. The Worshipful Company of Apothecaries brought Mr. Tegart upon his legs—and the Royal Society called forth (we are bound to believe, for we could not hear it,) the characteristic eloquence of Sir Everard Home. When the Church Militant (the Chaplains of the Army) was drunk, the Demosthenes of the party, the Rev. Mr. Clarke, delighted the company with an exquisite specimen of elocution, delivered in a very graceful and easy style. This brought forth thundering plaudits from all parts of the room. When the Medical Benevolent Fund was given, Sir Henry Halford again spoke with great effect. He eulogized the memory of his friend, and the profession's friend, Dr. Baillie, who had paid the debt of Nature since their last meeting, and complimented the present company on containing many who would imitate the example, and rival the fame, of the illustrious deceased. May this prediction be verified!

Success to the Naval Medical Supplemental Fund was given from the chair, and thanks returned by Dr. James Johnson. When the visiters' healths were given, several select and entertaining speeches were elicited. One, in particular, from an academician (Mr. Wilkie) attracted much attention. This gentleman drew an ingenious parallel between Medicine and Painting, always giving it in favour of the *former*. When in the midst of his speech, he observed that—"*the painter might flatter the vanity, but it was the physician who could mitigate the sufferings of human nature;*" the house rung with applause, and interrupted, for some minutes, the orator. Professor Brande and the Public Teachers of the Metropolis" called that distinguished lecturer upon his legs, amidst numerous symptoms of approbation. He confessed that the present honour done to him was quite unexpected, and therefore he had come to dinner *unprepared with a speech*, (much laughter.) The professor, however, returned thanks in a short and neat address, not at all the worse for being unpremeditated. We are unable to do justice to the various other orators on this festive occasion; but we cannot pass over the HEALTH of the LADIES who had patronised the benevolent fund. Who was to return thanks? Mr. Guthrie, with his usual promptitude at wit and humour, got up and observed that, as the ladies had no representative at the dinner, he moved that one should be elected for that purpose, and proposed his opposite friend (Dr. George Gregory) as the *longest and the strongest* man in the company—and consequently the most proper champion for the ladies, (peals of laughter.) Dr. Gregory very good naturedly got up (somewhat above six feet, amid much merriment and applause) and proved that his eloquence was not inferior to his altitude on this occasion.

At half-past ten o'clock the chairman retired amidst loud plaudits—and Sir James M'Grigor was called to the vacant seat, with enthusiastic unanimity by all present. The evening concluded with great harmony and hilarity, and the guests separated after a material and intellectual banquet of no common kind.—*Perpetuum Esto.*—Hospes.

XVI.

EXTRA-LIMITES.

I.

MR. BATTLEY ON THE COMPONENTS OF OPIUM.

To the Editors of the Medico-Chirurgical Review.

GENTLEMEN,

In pursuing the object, agreeably to my promise, of showing the constituents of opium, I shall, in the first place, speak of that part or portion of this drug, which has been introduced into medical practice by the French, under the name of *Morphium.*

Twenty-six pounds (avoirdupois) of dry Opium imparted to distilled water twenty-three pounds, leaving a residuum weighing three pounds, when dried: this residuum or *refuse,* I apprehend to contain the *morphium,* and to the exposition of this fact, my present and immediate purpose is confined.

This residuum of three pounds, was macerated in a mixture consisting of fourteen pints of distilled water and two pints of strong acetic acid, for twelve hours, three times, and to the liquor when drawn off, Ammonia was added in excess, when a change to a creamy state ensued. The creamy substance was shortly precipitated, and being separated from the fluid, was washed repeatedly in distilled water, and when dried weighed 38 drachms 20 grains. This substance I apprehend to be *morphium, so called,* (impure) and when divided by means of boiling sulphuric æther and alcohol, was found to consist of

		Drachms.	Grains.
	Resinous matter	15	7
At the rate of 29 grains per drachm of the 38 drachms 20 grains.	Crystals or *morphium, so called* (pure)	19	4
	Ditto, less pure	1	48
	Matter resembling earth, afterward dissolved in a diluted solution of potassa (less 13 grains)	2	21
		38	20

or 5 oz. avoirdupois and 100 grains.

Of the residuum of three pounds, 5 ounces remained suspended in the liquor, and 38 oz. in a fibrous greasy state, smell and taste unpleasant, peculiar to opium; this latter was boiled in alcohol twice, and being pressed, left in the cloth about 29 oz. having the appearance of calamita styrax, *free from the greasy appearance*, and nearly so *from the peculiar opium smell and taste.*

The alcohol thus boiled became of a deep brown colour, and on cooling, a tenacious waxy matter adhered to the sides and bottom of the vessel;—in this waxy matter the peculiar smell and taste before noticed, prevailed to an intense degree. The waxy matter weighed about 7½ oz., was highly combustible, forming compounds with oil and turpentine, and of a specific gravity somewhat exceeding water. By means of Papin's still, the alcohol was then brought over, and left about 2¼ oz. of resinous matter, partaking strongly of the taste and smell of Opium:—thus,

	Oz.	Qrs.
Waxy substance - - - - - -	7	2
Resinous matter - - - - - -	2	1
Appearing like calamita styrax - - - -	29	0
	38	3

being an increase of ¾ oz. which I apprehend to arise from the retention of moisture by the resinous and waxy matter.

The 29 oz. appearing like styrax, by the addition of diluted solution of potassa became gelatinous and greatly increased in bulk, and being dried at a temperature of 150°, formed a substance which when broken, exhibited a shining fracture.

Recapitulated, the residuum of three pounds is accounted for as follows:—

	Oz.	Qrs.	Grains.
Morphium, so called, (impure) 38 drs. 20 grs. or	5	0	100
Remained suspended in the first process . .	5	0	0
Last above mentioned	38	3	0
	48	3	100

I now proceed to show a similar result from the residual matter of Tincture of Opium, Tincture-bottoms. Of this matter, when perfectly dried, one pound was macerated in a mixture of strong acetic acid and distilled water for 12 hours. The maceration was repeated twice, and again twice in a similar mixture, at a temperature of about 150°, and to the liquor when drawn off, ammonia was added in excess; a change to a creamy state ensued, as in the first-mentioned experiment, and the creamy substance was in like manner washed and dried, and weighed

10 drachms 28 grains;—of this quantity, 8 drachms, 45 grains, were divided by means of boiling æther and alcohol, and consisted of

		Drachms.	Grains.
Resinous matter		4	6
At the rate of 28 grains per drachm of the 8 dra. 45 grs.	Crystals, or *morphium*, so *called*, (pure)	4	4
Matter resembling earth		0	56
		9	6

being an increase of 21 grains, which I apprehend to arise from the spirit detained in the extract.

Results nearly similar to those already mentioned, were obtained by boiling alcohol, from the remaining portion of the residual matter; that is to say, the substance having the appearance of calamita styrax, the waxy substance, and resinous matter.

The results were also similar, so far as the experiment was carried, from 10 lbs. of the residuum or *refuse* of Opium, subjected three times to boiling alcohol, viz.—

	Oz.	Qrs.	Gr.
Resinous matter	15	0	0
A Crystalline mass	19	3	20

This mass, when reduced by solution, and by the separation of the waxy and other matter, by means of boiling æther and alcohol, re-formed in crystals perfectly similar to the morphium, 19 drachms, 4 grains, and 4 drachms, 4 grains, resulting from the two several processes first mentioned, and weighed 62 drachms, 52 grains.

I shall in your next number, with your permission, advert again to Morphium, and to a fluid intimately combined with the waxy and resinous matter, and closely connected with the peculiar smell and taste of Opium; and then proceed to show the constituents of the twenty-three pounds imparted to distilled water (part of twenty-six pounds) as first above mentioned, but I must not now conclude without stating that laudanum, Tincture of Opium, does not contain any, or if any, only a very small portion of *Morphium*, (so called) and recent observation tends to confirm an opinion which I have long entertained, namely, that *Morphium* does not partake of the sedative properties of Opium, in more than a very limited degree, if at all.

I am, Gentlemen,
Your obedient Servant,
RICHARD BATTLEY.

Fore Street, May 15, 1824.

II.

DR. SANDERS ON THE TREATMENT OF PHTHISIS.

To the Editor of the Medico-Chirurgical Review.

Suum cuique.

Sir,—The 13th Number of your excellent Journal, dated June 1823, contains two articles, for my taking notice of which, when you see my annotations, the reason will be obvious, as well as the apology.

The one which claims priority is, *The Tonic Treatment of Phthisis*, *p.* 189. It is stated that, "in a paper by Dr. John Hume, you have seen many interesting remarks on that scourge of our country, Phthisis Pulmonalis, and also an expose of Dr. Stewart's plan, which is not generally known to the profession;" and (p. 190) Dr. Hume says, "that the greater part of his plan is borrowed from Dr. Stewart, who was led to the *peculiar* practice, which he has adopted in consumption, from *reflecting attentively* on some of Dr. Gregory's statements, when lecturing on that disease."

Dr. Hume has made two important omissions, the one is, that he has not favoured us with those statements, and those critical points in them, which exclusively drew the attention of Dr. Stewart; our dull comprehension needs such assistance, since we never could have expected the tonic plan to receive its first impulse from the quarter assigned. In the understanding of Dr. Gregory, during the 40 years, or more, that he was professor; in mine, while I attended either his class or the sick along with him; and in that of his other pupils successively; his statements led to opinions and prescriptions the very antipodes of the Tonic Method. We cannot, therefore, readily consent, that our illustrious preceptor, in sound mind, gave out *oracular* sentences, unintelligible to himself, and to all human beings besides, till Dr. Stewart began to exert *his* faculties of reflection. In ancient days, the Delphic Pythoness, in frantic raving, emitted responses fraught with fate, and none but those of the priesthood could unveil the secrets of the mystic diction; perhaps Dr. Stewart, having two attributes of Apollo, divinity and physic, is in our days, the only one possessed of the sacred gift, with this superiority over his prototypes, that he discovers mystery and the rudiments of momentous change, where, to every one else, there appears only plain and undisguised narration!

To be serious, I heard years ago, that something stated by Dr. Gregory suggested the tonic plan of treatment, and I suspect, that Dr. Hume has merely repeated this report without any direct authority. It may be asked, why did not Dr. Stewart disclose, whence he had the method ascribed to him, and contradict the account published by Dr. Hume? I answer, that a man may have motives for concealing what is true; though he would not incur the guilt and reproach of wilful and deliberate falsehood.

Dr. Hume has not supplied *data* by which we could solve any question concerning the origin of the plan which he professes to have borrowed. I have remarked, that he had made two important omissions, the one relative to the alleged statements I have considered: the other is this, he has not told us at what time the paroxysms of inventive cogitation attacked Dr. Stewart. Was it before, or was it after, the Tonic Method was brought under the review of the Medical Society of Edinburgh, in which the reverend physician was one of the presidents? If before, why did he conceal, or rather why did he not seize an occasion so suitable for declaring his sentiments? If after, of what avail was his attentive reflection! I will endeavour to supply the deficiencies of Dr. Hume, by giving both statements and dates. In fine, I doubt not I shall make it evident, *when, where, and from whom Dr. Stewart borrowed the plan entire in principle and in application.*

For several years previous to 1802, when I was admitted a member of the Medical Society, I had been occupied with the investigation of the Nature and Treatment of Phthisis Pulmonalis; being satisfied myself, and believing that I could satisfy others, that many would have been saved, and the sufferings of many more alleviated, or their lives prolonged by a kind of management opposite to that then prevalent, I introduced *The Tonic Treatment of Phthisis* to the consideration of that Society *where Dr. Stewart had long signalized himself as an orator, and, be it remembered, long after he had attended the Lectures of Dr. Gregory;* yet, even at that time, so little impression had any former statements made on his retrospective intellect, that he added his voice to theirs, who denounced the Tonic Treatment as a daring innovation. It was not a topic of private conversation among a few, it roused the minds of all who attended the meetings, or, at least, who took any concern in the business for which they were held; contention had not been so hot from the time of the Cullenians and Brunonians; some said, that my notions were fanciful; others, that my conclusions were premature; some maintained, that the system was neither new nor original; and, not a few, pronounced it presumption in so young a man, to impugn doctrines and proceedings so long approved and taught by eminent and learned men, whose reputation had increased with their years. I replied, that, if my notions were fanciful, I appealed to facts; if my conclusions were premature, I submitted to their deliberate examination, both premises and conclusions; with regard to novelty or originality, I aimed at neither; utility was the end of my exertions; with regard to derogating from lessons and conduct of high sanction, this was an objection of equal force against every species of improvement; that while I had the utmost respect for our predecessors and seniors, I bowed to no authority in science but that of truth. Is not, said I, our knowledge of Phthisis confessedly very defective? and does the almost uniform failure of the means commonly employed, not demand serious and patient inquiry? Science is not to be advanced by plausible arguments, nor errors to be corrected by inveterate prejudices, yet by no other weapons am I here assailed. You admit, that the plan of research which I have chosen, is unexceptionable, and that the results, if they were to be relied on, are of great value; ought you not then, to dispassionately ascertain whether there is any inaccuracy in the observations, or imperfection in the statements, rather than hastily reject those facts and views, which, even in your own judgment, if verified, would prove of such importance?

My opponents found it easy to reiterate their assertions, but not so to refute my reasoning; in consequence, a small party spontaneously arose in favour of what were in ridicule called "*The New Doctrines;*" disputation became more animated and better sustained, a certain degree of interest was excited, and the controversy was no longer confined within the circumference of our Hall; the students dreamed, and it was only a dream, that the professors were offended; the sycophantish showed themselves now more noisily hostile, and the timid gave up or shunned my acquaintance, lest it should affect their graduation; some, professing friendship, admonished me no longer to agitate such subjects, as they raised against me a host of enemies, and truly, in these discussions commenced professional antipathies which continue to this day. All this while Dr. Stewart afforded me no assistance; he gave no utterance to *his attentive reflections.*

But I am not one of those that can soon be deterred from vindicating what, I am convinced, is right. I induced several of my fellow-members to visit the patients along with me; melioration or recovery imparted confidence in the means advised; and, when any case terminated fatally, the causes of failure were anatomically explored. The events fully confirmed my statements. In this manner, I procured a mass of evidence not to be resisted. At first, there was not one to second; now, scarcely one had the hardihood to oppose.

By this time, from 20 to 30 gentlemen had united their observations with mine, and the Tonic Treatment began to acquire something like attention. I do not believe, that one listened to these discussions whose practice is not more or less regulated by what he then heard; nor do I know above one or two in this city, who persevere in the old method of emaciation.

After my inquires had undergone this severe scrutiny for two or three years, I presented a compendium of them in a paper, which stands on the records of the Society for 1805-6. This essay was the outline of a work which I had ready for the press in 1806, and which was published in January 1808, entitled "*Treatise on Pulmonary Consumption, in which a New View of the Principles of its Treatment is supported by Original Observations on every Period of the Disease, &c.*"

Within this period it was, that Dr. Stewart began to try the Tonic Method. Though he had been a pupil of Dr. Gregory, and a speaking member of the Society long before 1802, he never imparted the slightest idea of the Tonic Treatment; and, when brought forward by me, it was so foreign to his manner of thinking, that he was one of my most formidable antagonists; nor of a different spirit were his essays, as the records of the institution testify; he there evinces no deviation from the common routine. He neither spoke, wrote, nor acted according to the Tonic Plan, as far as we have been able to learn, till two years after he had been made acquainted with it, in all the amplitude of detail.

How did the impressions made on him by Dr. Gregory lie so many years dormant? What, I ask again, was the necessity of his *attentively reflecting*, to devise a system that was formed for him, and explained to him, accompanied by all the facts by which it was supported; on whom could he flatter himself that such a fable would impose; or how could he fancy that such an imposture would escape detection?

Truth gradually undermines the prepossessions of her adversaries, so it was, I imagine, with Dr. Stewart, in defiance of himself, the Tonic Method had gained upon his thoughts; till an occurrence which I shall relate, gave it the ascendency. Within the period above specified, he visited where a lady was under the old regime for Phthisis Pulmonalis; the disease proceeded uncontrolled, and her state was pronounced hopeless. Now he determined that nothing possible should be left unattempted. What was esteemed *the best treatment* having failed, he thought she could *but die*, under that which he had considered *the worst.* "A doubtful remedy is better than none." Instead of every privation, he ordered her nutritious diet, air, and exercise, sponging with cooling liquids to allay morbid heat; tonic medicines to strengthen the stomach and bowels; every thing calculated to invigorate the body and exhilarate the mind; in short, all the parts of the new mode, which was still sounding in his ears. His wishes were realized; the lady recovered, and her relations extolled him to the skies; other patients of rank applied, fortune did not desert the practitioner. Why, when elated with success, he did not tell to whom he was indebted, it is not for me to conjecture. I recollect well, that it was a favourite theme with Dr. Stewart, "that mind is independent of matter," but he was not so conscious then, perhaps, of the power of the precious metals!

It may be very true, as you say, that "Dr. Stewart's plan is not generally known to the profession," or, in other words, it is not generally known, that the Method of Treating Phthisis adopted by Dr. Stewart, is precisely that which I published about 16 years ago, and that the same Method has been practised by myself, and known to many of the profession nearly 20 years. The preface, the narrative, and the cases, with their dates, will establish incontrovertibly all that I have here written. You have only to open the small volume at the title, Treatment, you will see the system fully developed; the very principles and illustrations of the plan; and those passages which you have quoted, you will there recognise nearly *verbatim et literatim.* Dr. Stewart, I say again, would hardly ascribe to Dr. Gregory, or claim for himself, the plan for which Dr. Hume unknowingly gives him credit; were, which I trust not, his disposition so despicable, yet prudence would prevent him, since he is aware, that there are many practitioners and teachers of medicine in this city, and physicians and surgeons in every quarter of the globe, equally acquainted with the facts, though they have not used them so advantageously.

Let Dr. Stewart and Dr. Hume settle this affair between themselves at their leisure; and if this communication excite uneasy emotions any where, let blame devolve on whom it ought; every man who assumes what is not his own, or who prefers emolument to integrity, must bear the consequences. This it is the duty of a reverend gentleman to inculcate, but really the misfortune of any one to experience.

I assure Dr. Stewart, however, that in preferring my claim, I do it without animosity or resentment: he has been of service, and so far I thank him: the first Phthisical Patients whom he had under his care, were persons of distinction; his success confirmed the practice, and their influence gave it celebrity; he, therefore, afforded me no inconsiderable assistance to substitute a rational and salutary, instead of an empyrical and dangerous, manner of thinking and acting in that horrid disease, which you have well named "the scourge of our country."

I dare say, Mr. Editor, you are tired of this expose, and so am I;—just a word or two more before we part. "Suum cuique," the motto prefixed to this letter, implies a moral precept, which I am sure you wish to obey.

This historical sketch of the origin and progress of the *Tonic Plan*, will enable you to decide whose it is; and whether it deserves commendation, or the contrary, you will attribute to Dr. Stewart no other merit or demerit, than *that of borrowing, without acknowledgment, the system to which he adheres, in the treatment of Pulmonary Consumption.*

Yours truly,

JAMES SANDERS.

Edinburgh, March 1824.

III.

MR. WEISS'S SURGICAL INSTRUMENTS.

In publishing the Plates, with the descriptions and observations accompanying them, sent us by Mr. Weiss, we deem it a justice due to him, to take the opportunity of briefly enumerating all the various other instruments invented by him for surgical purposes, which are not already noticed, and which are taken from his Catalogue.

1. The Aneurism Needle for passing ligatures under deep-seated arteries, which enables surgeons to perform the tying of those arteries with facility, which was previously done with great difficulty.—Messrs. Kirby, Travers, and Brodie, bear testimony to the utility of this invention.

2. The Dilator of the Female Urethra, which dilates the urethra, with great ease, to an extent, that admits of the admission of

a forefinger to feel the stone, and of a pair of forceps to extract it. By these means, very large stones have been extracted from the female bladder by Sir A. Cooper, Mr. J. H. Green, Mr. Phillips, Mr. Brodie, and Dr. A. Ramsay.

3. A HERNIA KNIFE, so contrived, that its cutting edge may be covered at pleasure.

4. A new SPECULUM ANI aut VAGINÆ, which possesses many advantages over the old ones. There is a plate of another Speculum, which Mr. Weiss considers an improvement on the above.

5. A newly invented ENEMA SYRINGE, which prevents the injection of atmospheric air with the lavement, and may be used in five different positions by the patient, without assistance.

6. An improved CUPPING APPARATUS, in which a globe vacuum is attached to the cupping-glass, so that when the glass is applied to the part to be cupped, a cock is turned, and the air from the glass rushes into the vacuum; after which, the glass is removed from the globe, which is screwed on other glasses in succession, as often as the occasion requires.

7. The FEMALE URETHRA DILATOR, further improved, so as to enable it to dilate in the direction of a straight line.

8. The FLEXIBLE GUM CATHETERS, constructed so as to retain the form of the urethra, originally given them in the manufacture. "They do not suffer (says Sir E. Home) from the urine in the bladder, or the mucus in the urethra," and no incrustations adhere to their highly polished surface.

There are some other inventions of Mr. Weiss, of minor importance, not noticed in the Catalogue.

It must strike every one, on the most superficial consideration, how much the reputation of English surgeons of the present era, has been upheld by Mr. Weiss's ingenuity, as his inventions have enabled them to perform operations and relieve the greatest human afflictions, in a manner, that will be the admiration of all posterity. He observes, that he has not a patent for any of his inventions, which, the profession must be aware, could only be accomplished and completed at a great expense, and with much devotion of time. He, therefore, sanguinely anticipates (what he deserves) the patronage of the profession at large, and as "the first professional gentlemen go to his house, when any idea strikes them that their surgical instruments are defective and can be improved," in order that his ingenuity may be rendered available, it is only fair to suggest that they should "go to his house" and patronise him, when they want instruments not of his invention, or drawn from his ingenious mental store.

"*Explanation of the instruments delineated in the Plate published in this Number of the Medico-Chirurgical Review.*

"Fig. 1. Take hold of the flat part, A. and, by turning the handle, you can open it to its full extent. As soon as you feel you have the stone between the blades, turn back the handle, and the strength of the springs will break the stone.

"No. 2. The thumb, when pressed upon the upright, B. will open the instrument; C. is a small screw to be taken out for the purpose of further extending the instrument in case it should grasp a stone too large to be extracted through the Urethra.

"No. 3. Shows the instrument closed.

"No. 4. An instrument which has given much satisfaction to Mr. Guthrie. To open it as described in the plate, hold it with the finger and thumb at D., and turn the handle to the right: turn it to the left, and it will shut as in fig. 5.

"No. 6 & 7. An instrument much approved of and recommended by Mr. Brodie for Phimosis, which opens and shuts like the last instrument.

"No. 8 & 9. A small instrument for dilating the Urethra.

"Mr. Weiss having made several useful inventions, thinks he is entitled to lay before the public a complete gauge which may be used for his instruments as also for bougies and catheters. This gauge possesses a great advantage over Mr. Smith's for metallic bougies, which only graduates from one to twelve, being better divided and having more sizes. This will be of great advantage to gentlemen in the country; he therefore intends to sell them at the very moderate price of 6*s.* 6*d.* by which means they will come into general use, and he flatters himself the profession will approve of his plan and give it a preferenee, as there are at present so many different gauges."

IV.

SURGICAL ENGRAVINGS.

PROSPECTUS OF A SERIES OF ENGRAVINGS,

DESIGNED AS

Practical Illustrations of the Surgical Anatomy of the Blood-vessels, Nerves, and other important Parts divided in Amputation.

By THOMAS ALCOCK, Surgeon.

The difficulties occasionally experienced in finding and securing the arteries, and in avoiding the nerves, must have been observed by all who have witnessed many surgical operations. That these should occur is not surprising, when it is considered, that hitherto the Surgeon has possessed no aid in directing his attention to what he should readily find or certainly avoid, equal to that experienced by the traveller on referring to his map, or by the mariner in consulting his chart. It is the object of these Engravings to supply this deficiency, by exhibiting to the eye the actual and relative situation of all the principal arteries, veins, nerves, and other parts divided in amputation, at the various points usually selected for the performance of that operation; whilst the most essential circumstances are clearly explained by annexed notes of reference.

Each Plate comprises a finished coloured Engraving of the natural dimensions of the part of the body represented, to which are added an explanatory outline and copious notes of reference; so that each Plate forms a complete illustration (adapted to the advanced Student or to the practical Surgeon) of the amputation of that part of the limb represented, without depending upon any other of the series of explanation.

The first Plate represents a section of the leg, at the usual place of performing amputation below the knee, *i. e.* nearly one-third the length of the tibia from its upper end; and may serve as a specimen of the work, and of the manner in which it is proposed to elucidate each subject.

From the care which has been bestowed to render these Engravings, with their explanatory references, accurate in all essential particulars, and subservient to actual practice, the Author trusts they may be found useful as guides, in directing the attention of the Surgical Student, and as charts of reference to the experienced Surgeon.

Plate I. may be had of Messrs. Burgess and Hill, 55 Great Windmill-Street, London, and of other medical booksellers, price 7*s.* 6*d.*; or mounted, 10*s.* 6*d.* A few proof Impressions, coloured under the Author's immediate direction, price 15s. each; or neatly mounted, fit for suspension in the surgery of the private practitioner, or in the operating rooms of hospitals, price 20*s.*

Plate II. illustrative of the amputation of the Leg by the flap-operation, is in forwardness, and will soon be published.

The operations on the Thigh, the Arm, the Fore-arm, as well as those at the Shoulder and Hip-joint, will be comprised in the remainder of the series.

Gentlemen who may be desirous to possess early impressions of the Plates, are requested to forward their names to the publishers, Messrs. Burgess and Hill, that the delivery of the copies may be in the order of subscription.

☞ *See outline of Plate No.* 1, *in this Review.*

Subscribers are informed that in consequence of the increased size of the Medico-Chirurgical Review, every two Numbers will hereafter form a Volume, of upwards of 500 pages, instead of putting four Numbers to the Volume.

N. B. Works have been received from Dr. Mills, Mr. Sandwith, and several others, too late for the Bibliographical Record of this quarter.

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THE

Medico-Chirurgical Review.

VOL. V.] (Analytical Series.) [No. 18.

"Nec tibi quid liceat sed quid fecisse decebit
"Occurrat, mentemque domat respectus honesti."

VOL. I.] SEPTEMBER 1, 1824. [No. 2.

[NEW SERIES.]

I.

LALLEMAND ON THE BRAIN.

Recherches Anatomico-pathologiques sur l' Encéphale et ses Dependances. Par F. LALLEMAND, Professeur de Clinique, &c. a Montpellier. Lettre Quatrième. 8vo. pp. 230. Paris, 1823.

"Ars Medica tota in Observationibus."—HOFFMAN.

OUR readers are aware that we have given full analyses of the three preceding letters of the distinguished pathologist of Montpellier;* and we now proceed to render an account of the present letter, which is principally occupied with an interesting class of affections, hitherto but little treated of in this country —namely, diseases of the brain and its coverings, propagated from inflammatory affections of external parts, especially the ear. We suspect that these affections are of much more frequent occurrence than is generally imagined, and that many lives are lost, from considering them as unimportant and external at the beginning, while, in reality, they are spreading to and invading structures of vital consequence within the head. On this account it must be instructive to have as many histories registered as possible, both to pursue, at present, and refer to hereafter, when similar accidents occur in practice.

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* Vide No. 11, for December, 1822.

In the present letter, then, our author proposes to treat of what may be termed *encysted abscesses*, which he conceives to be the result of acute, but much more frequently of chronic, inflammation. In the *former* case the train of symptoms is much more regular, and their character more marked than in the *latter*. In the *former*, the intensity of the malady overcomes age, sex, and temperament, which in the chronic affections, modify and greatly obscure both the march and nature of the symptoms. It is only, as our author properly observes, by a careful collection and comparison of individual cases, that a proper idea can be formed of this class of complaints, and, therefore, the reader must divest himself of fastidiousness while perusing the narratives we are about to lay before him, and which we shall endeavour to condense into as small a space as possible.

Case 1. This case was communicated to our author by that very accurate pathologist and able surgeon M. Breschet. Mary Gabriel, from her youth, had something remarkable in her physiognomy. Whenever she took strong exercise, her face became red, and her respiration (which was habitually short) much embarrassed. At the age of forty-seven she ceased to menstruate, and began to complain of palpitations, and acute pain in the precordial region. She would frequently stop to feel the action of the heart, and prognosticated that she would soon die. Her face now became of such a blue cast, even when walking slowly, that she was ashamed of appearing in the streets. She was subject to profuse nasal hæmorrhages—cramps in her limbs—debility. On the 1st July, 1821, she complained to her sister of cramp and pain in the *left* hand and foot, and soon experienced much embarrassment in the motion of these members, which, in a short time, was entirely lost, as were sensation and motion of the whole body. On the 3d, she entered the hospital, her face being of a violet colour, eyes sparkling and prominent, respiration very difficult, pulse small and easily compressible at the *left* wrist, but hard and strong in the right arm; complete loss of sensation and motion of the *left* side of the body. In the night, the paralyzed members were suddenly affected with convulsive movements, and the breathing became very embarrassed—the pulsations of the heart were very tumultuous. Fifteen leeches to the anus—digitalis internally. In the morning, the symptoms were calmer. 4th. Bled from the arm. Between the 5th and the 12th, the patient presented several paroxysms similar to those described on the 1st day; but, toward 12 o'clock on the 12th, she became insensible to surrounding objects, and agitated by convulsive movements, in which state she continued till the next day, when she expired.

Dissection. In the anterior part of the *right* hemisphere of the brain, an abscess was discovered containing about three ounces of greenish pus, enclosed in a real cyst, capable of being completely dissected out, and yet the most accurate examination by glasses could not detect any vessel going between the brain and the cyst. The cerebral substance in contact with the cyst was of a deep red colour, which insensibly diminished as the distance from the cyst increased.

Throughout the whole of this coloured portion, the cerebral substance was less consistent than in the rest of the brain. The whole capillary system of the brain, arterial and nervous, was gorged with blood, and between the meninges was scattered some gelatinous matter here and there. The heart was greatly enlarged. The right auricle was very much so, and contained several ounces of blood. A small communication existed between the two auricles in the situation of the original foramen ovale. The auriculo-vetricular opening between the right auricle and ventricle was very much narrowed, the ventricle of this side not being more than the size of a pigeon's egg, nor capable of containing more than a few drachms of blood. The parietes of this ventricle were from 11 to 16 lines in thickness. At the origin of the pulmonary artery, instead of the three semilunar valves, there was one horizontal valve stretched across, with a hole in its centre. The left auricle was natural, the left ventricle rather enlarged, and some patches of ossification on the aorta.

M. Lallemand makes several pathological and physiological observations on the above case. He conceives that the malformation at the origin of the pulmonary artery was probably congenital, and by obstructing the flow of blood from the ventricle, caused at each ventricular contraction a reflux of blood into the right auricle, and thus a stasis in the whole venous system. On the other hand some black blood was necessarily mixed with the red, through the foramen ovale, thus producing the blue tint of skin before described, together with the debility and the embarrassment in breathing when taking exercise.

The obstacle at the origin of the pulmonary artery explains the hypertrophy of the right ventricle. To overcome the continual resistance which it experienced in emptying itself of blood, its action, and consequently its nutrition, increased in proportion. The patches of ossification in the aorta will probably explain, he thinks, the cause of the pulse of one wrist being smaller than that of the other, as it is highly probable, though not specified by the dissectors, that the orifice of one of the subclavian arteries was narrowed, as was the case in a patient whose history is related in one of the former letters, and who presented a similar phenomenon in the pulse.

The paralysis on the left side of the body was preceded by spasmodic contractions in the hand and foot of that side, and the disease of the heart did not prevent the symptoms of cerebral inflammation from following their usual course. Again the inflammation of the brain did not sensibly affect the symptoms attendant on the cardiac affection.

Our author has remarked in former letters, that in almost all cases of cerebral inflammation, the paralysis confined at first to one side, extended finally to both sides, with loss of sensibility and a state of coma. Dr. Lallemand attributes this series of symptoms to compression of the sound hemisphere from the gradual tumefaction of the inflamed one—an explanation, in our opinion, extremely ingenious and probable.

Case 2. The following case was communicated to our author, while the former was in the press, by Dr. Andral, junior, whose pathological researches are already favourably known to our readers.

A man, aged 27 years, had felt, for some time, a sort of weight rather than pain in the right side of his head, to which he paid little attention. On the 18th December, 1821, after a hard day's labour, he experienced in the left arm a great tremour, soon after which he complained of tinnitus aurium, and then fell into a state of insensibility. 19th. Return of the natural and sensorial functions, but continuation of the spasmodic affection of the right arm. On the 20th the tremors of the arm changed into a sense of weakness, want of power, and numbness of the same member. 22d. On entering the St. Louis hospital, he presented the following symptoms—viz. pallor of the face—integrity of the intellectual functions—paralysis of the left arm—at least he had little power over this member, although the hand was involuntarily bent on the fore-arm—pain in the right side of the head—pulse slow and feeble—the other functions undisturbed. Some trifling and inactive remedies were employed. The same state continued till the 25th. On the 26th there was redness of the face, strong cephalalgia (12 leeches to that side of the head). 31st. 15 leeches were applied to each side of the head. Delirium and agitation throughout this day. On the 1st of January, the eyes were rolling in their sockets—head agitated by continual movements from one side to the other—left arm completely paralytic—the right arm and leg affected by spasmodic twitchings—pulse (for the first time) frequent—24 leeches to the neck. The patient died next day.

Dissection. The tunica arachnoidea on the superior surface of the hemispheres, particularly on the left side, strongly injected. The circumvolutions of the posterior lobe of the right hemisphere flattened, and giving to the finger the sensation of a fluctuation. An incision gave issue to a quantity of pus, and disclosed an irregular cavity, capable of containing the yolk of an egg, separated from the arachnoid membrane by a very thin layer of cerebral substance, and communicating by a kind of fistulous pipe with another cavity, capable of containing a drachm or two of matter. The internal surfaces of these two cavities were lined with a fine and smooth membrane, which could be separated from the surrounding parts, and when macerated in water, showed a villous and fibrous structure, not unlike the mucous membranes. The surrounding cerebral substance was neither harder nor softer than natural. The thoracic and abdominal viscera were sound.

Our author justly thinks that, from the state of the membrane enclosing the purulent matter, the inflammation must have been of some considerable duration, although there was no other indication of its existence than the sense of weight in the head. In fact numerous cases attest, that CHRONIC inflammation will destroy a whole hemisphere of the brain, without exciting symptoms of an alarming nature.

The third case is abridged from the 1st volume of our respected contemporary, the Edinburgh Journal, p. 150, and therefore need not be cited here.

Case 4. Miss Perrot, 16 years of age, fell, in the latter part of November, 1816, from a first floor, and pitched on her head. She lost not her sensibility at the time, but soon after experienced lancinating pains in the whole circumference of the head. Twenty leeches to the temple,—a vein opened in the foot—sinapisms—a large blister to the head. By these energetic measures the pains were dispersed, and, during a month, she did not complain. At that epoch she experienced acute and lancinating pains in the muscles on the back of the neck, and also convulsive twitchings there, which at first came on only once a day, but in the course of a fortnight they became almost constant. She was received into the Hotel Dieu on the 12th of January, 1817. The pupils, at this time, were alternately contracted and dilated by the same degree of light—the muscles of the neck were very painful—the pulse was irregular—the face sometimes flushed, sometimes pale—the patient complained much of cold. Sixteen leeches to the neck and behind the ears—bled from the feet—pediluvia—sinapisms. In the day, continually crying, with convulsive movements, and sickness at stomach—could sometimes answer, though with reluctance, distinctly to questions. She died next day.

Dissection. On removing the calvaria, both hemispheres of the brain appeared more protuberant than natural, the circumvolutions flattened, indicating effusion in the ventricles. These were filled with serum. The tentorium adhered to the subjacent arachnoid by a very thin layer of coagulable lymph—the tunica arachnoidea, as well as the whole surface of the cerebellum, was exceedingly injected, and in the left lobe was discovered a smooth body, some lines in thickness, and perfectly circumscribed, about the size of a pullet's egg. When completely detached, it was found to be enveloped in several layers of cellular tissue. When opened, it was found to contain a good spoonful of greenish pus, exactly resembling that discharged from an abscess, and without smell. The internal surface of the cyst was smooth, and rather villous. The substance of the cerebellum was somewhat softer than that of the cerebrum—nothing remarkable in the other cavities of the body.

Remarks. The symptoms had been so completely dissipated by a rational and active treatment, that no suspicion was entertained of the existence of an abscess. Our author has shown, by several histories in preceding letters, that it is, when the inflammatory fluxion ceases and the pus is collected into a focus, that the symptoms diminish and the brain resumes its functions, notwithstanding the presence of a foreign body.* Here, as on former occasions, the symptoms of acute hydrocephalus alone characterized the latter period of the complaint; and it was under this denomination that the case was recorded—nor did the dissection belie the prognosis. "The more, (says our author,) we advance in the study of chronic *alterations of structure* in the brain, the more we shall be convinced that it is rarely by *them* that death is caused, but rather by inflammation or hæmorrhage in the neighbouring parts—most frequently by arachnitis, acute or chronic. In all these cases the character of the original disease disappears, and its existence is seldom suspected."

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* "Vous voyez que c'est toujours quand la fluxion inflammatoire cesse, quand le pus se réunit en foyer, que les symptomes diminuerent, et que, malgré la presence de ce corps étranger, la substance cerébrale peut reprendre entierement ses fonctions." 38.

Case 5. Gabriel Gontaine, 39 years of age, had been subject from his infancy to frequent bleedings from the nose, and discharges of purulent matter from the ears, both of which had been suppressed for two years past, after a violent blow on the head. During the latter period, he had frequently been affected with something like mental aberrations. Three months previous to his entering the hospital, he experienced a violent pain in the *left* side of his head, which had never ceased. During the last five days of this period, he had lost the use of speech entirely, and was quite disordered in his ideas. Presently, paralysis of the *right* side took place, in which state he entered the Hotel Dieu, on the fifth of February, presenting the following symptoms, viz.—hemiplegia of the *right* side—loss of hearing and speech—pulse frequent and feeble—respiration not affected. Some trifling remedies were employed, and this state continued with little alteration till the 17th, when he died.

Dissection. The circumvolutions of the hemispheres of the brain appeared flattened, when the calvarium was removed. In the posterior lobe of the *left* hemisphere a large purulent depôt was found containing nearly four ounces of matter, enclosed in a strong cyst, composed of two membranes that could be easily separated. The cerebral substance in the neighbourhood of the cyst was very soft, and of a yellow colour in some places. The opposite side of the brain was quite sound. No change in the thoracic or abdominal viscera.

Remarks. At first sight, our author observes, one would suppose that the inflammation had only commenced about three months previously to the entrance of the patient into the hospital, since it was only during this period that *pain* had been complained of in the left side of the head. But it must be remembered that, after a violent blow, there was a cessation of an accustomed epistaxis, and of a purulent discharge from the ears, followed by some intellectual derangement—and also that the parietes of the cyst were composed of distinct and well-organized membranes. These circumstances will induce us to conclude that chronic inflammation had been going on in the brain for a much longer period than three months, notwithstanding the want of many phenomena which are usually considered to be attendant on phlegmasia of so important an organ as the brain.

Case 6. This case is quoted from Scultetus, and is that of a soldier, 27 years of age, who received a sabre wound on the back of the head, with a lesion of the occipital bone. It was treated as a simple wound, and six months afterward the man was received into hospital. The surgeon introduced an instrument through the meninges, and even into the substance of the brain, whence issued a quantity of pus. Paralysis of the *right* side came on, on the 20th day after this operation, and the patient died, seven months after the original wound. On dissection an abscess was found in the *left* hemisphere of the brain enveloped in a thick tunic. It is evident, our author thinks, that the commencement of this organic change was nearly coeval with the sabre wound, although so long unattended by any external symptoms which would lead one to suspect the existence of such growing mischief.

Case 7. A young gentleman, a student at Copenhagen, complained frequently of severe toothach, accompanied by a short dry cough, and some redness of the eyes. He had the tooth drawn, but the pain continued, and even extended to the neighbouring parts, especially the os malæ of that side. One day he suddenly fainted and was a long time in recovering his senses. Next day he was unable to get up, feeling a heaviness of the head, and an insurmountable oppression. The Physicians administered antispasmodics and stimulants; but he had several epileptic attacks, and finally died exhausted, retaining his senses to the last moment. On dissection, nothing unusual could be detected in the thorax or abdomen; but, on examining the brain, an encysted abscess was found deep in the right hemisphere, the size of a pullet's egg, and filled with fetid pus.

Passing over several cases of encysted abscess of the brain, observed or collected by our author, but which are analogous to those we have analyzed, we come to that class which occupies the principal portion and interest of the volume under review.

M. Lallemand observes that caries of the *temporal bone* more frequently produces chronic inflammation of the brain than caries of any other portion of the cranium. Morgagni and Itard, the only authors who have touched with any freedom on this subject, have, in M. Lallemand's opinion, taken up some false notions respecting it. He therefore considers the topic of investigation as not only very important, but almost new, and proposes to trace the connexion of the two diseases from their lightest shades or forms to their most grave and destructive consequences.

We shall find, he remarks, in the records of medicine, and particularly in the periodical journals, examples of acute and chronic otitis, which have terminated suddenly in death, after evincing symptoms of cerebral affection. On dissection, there have sometimes been found collections of pus in the cavity of the tympanum—the dura mater inflamed, thickened, injected, or softened, and detached from the internal surface of the skull,—and yet no alteration in the brain itself capable of explaining the cerebral symptoms. It is possible, that sufficient attention was not, at that period, paid to the colour, consistence, &c. of the substance of the brain, by which we now recognise the existence of previous inflammatory action; for, from the cases which shall be laid before the reader, M. Lallemand hopes to prove that the brain does participate in these inflammations of the meninges.

Case 8. Coindet, in his memoir on hydrocephalus, relates the case of a youth, 17 years of age, who, after suppurative inflammation of the *right* ear, became affected with violent pains in the head, ardent fever, which put on a remitting form, and after four paroxysms terminated in symptoms of acute hydrocephalus, as convulsions, slowness of the pulse, paralysis of the *left* side, dilatation of the pupils, profound coma, and death in the fifth accession or paroxysm.

On dissection, there were found inflammation and considerable softening of the brain opposite to the right temporal bone (petrous portion) and extending to the ventricles, which were filled with serum. This case, he thinks, requires little comment.

He next relates a case by Dr. Abercrombie, in our respected contemporary of the North (for July, 1818,) which we need not farther cite here than by remarking that, after a long discharge from both ears, the mastoid cells became carious, followed by pains in the head, gastric affection, and ultimately coma, convulsions, and death.

On dissection, the right hemisphere of the brain throughout half its extent was converted into a purulent and pulpy mass, with great effusion into the ventricles.

Case 9. Conrard, 20 years of age, after a scuffle, in which he had received several blows, fell ill and evinced symptoms of low fever, under which he sank on the 20th day. The magistrate, suspecting that death might have been the consequence of the blows which the young man had received, ordered the body to be opened, and the physicians found as follows;—1st, the brain rather more injected than natural—2d, between the surface of the brain and the basis cranii a small quantity of purulent effusion—3d, in the anterior portion of the *right* lobe or hemisphere of the cerebellum a purulent depôt—4th, the arachnoid opposite to the *right* petrous portion of the temporal bone adherent to the dura mater, and redder than natural. The physicians took some time to consider this case, and in the mean time questioned the parents of the youth, who had the candour to acknowledge that their son had suffered a long time from pains in the head, and also in the *right* ear. The physicians then renewed their investigations, and found the mastoid cells of the right side full of pus, as well as part of the internal ear. They therefore declared that disorder existed anterior to the scuffle, which could only have hastened the march of the disease.

M. Itard, in his monograph on diseases of the ear, appears to regard a discharge from the meatus externus as a constant symptom attendant on chronic otitis—at least, he recites no case in which it was absent. But M. Lallemand has seen two instances in which there was no discharge. Both of these people had a dull pain in the interior of the ear, aggravated by cold or moisture—an habitual bad taste, and sense of disagreeable odour in the back part of the mouth, especially when the pain was considerable, and in certain positions of the head, or acts of deglutition,—occasional dislikes to food—nausea, and even vomitings.

Case 10. Elizabeth Erot, 23 years of age, had had a discharge from the left ear, from the age of 7, (at which period she suffered from the smallpox) accompanied by pains in the head, which increased rather than diminished with her age. In the month of November (being then in a late stage of pregnancy) she experienced such severe pains in the crown of her head, as to make her cry out, and which pains were diminished by pressure, At this period the discharge from the ear had diminished. The bowels being constipated, lavements were prescribed, and fomentations to the ear. The pains increased, with spasmodic twitchings of the arms. Her accouchement now took place, but produced no relief, and this interesting female sunk under her afflictions.

On removing the calvarium, the dura and pia mater were found inflamed, and in the left hemisphere of the brain an encysted abscess. The petrous portion of the temporal bone was carious and black. This case is recorded by Bonetus. Our author remarks that the lymphatic temperament is peculiarly prone to chronic affections of the ear, and that the smallpox is a very frequent exciting cause of deafness, and purulent otorrhœa. It may be observed, that as the discharge diminished, in proportion was the headach augmented. Was this merely accidental? Our author is far from thinking so. He is disposed to view the affair thus:—the chronic otitis produced, by its immediate vicinity, an inflammation of the brain; hence resulted an encysted abscess—and when the envelopes of the brain took on *acute* inflammation, cephalalgia, convulsions, suppression of the discharge, ensued.

Our author next cites two cases from the writings of Dr. Abercrombie, with which our readers are sufficiently acquainted.

Case 11. (From Sabatier.) A small ball of paper introduced into the ear was seen by Mr. Sabatier, to produce disastrous consequences. The efforts to extract the foreign body only served to force it deeper into the ear—nevertheless the patient continued to enjoy good health for some months, at the end of which time he was seized with what was termed putrid or malignant fever, accompanied by violent pains in the head, of which he died on the 18th day. On opening the head it was found that there was an adhesion of the brain to the dura mater covering the petrous portion of the left temporal bone, and at this place was situated an abscess, communicating with the cavity of the tympanum, where the foreign body was lodged.

Case 12. (From Labius.) Jean André, robust, and in the prime of life, experienced about the end of April, 1813, an attack of continued fever, accompanied by grave symptoms, from which he recovered, but still remained melancholy, with defective vision, which last symptom increased till he completely lost his sight, having several times, however, partially recovered vision, during temporary discharges of purulent matter from the ear. Toward the end of the summer of the said year, a tumour arose behind the left ear, which lessened a little during a discharge from the meatus, and enlarged again a few days afterward. These alternations took place three or four times, accompanied by periodical pains in the head. Finally, on the 1st of November of that year the patient experienced an attack of apoplexy, in which state he lay insensible and motionless during three days. On the fourth day, he recovered the use of speech, and asked for something to eat. He swallowed with great difficulty. The *left* side was paralyzed—the *right* agitated by convulsions to the moment of his death, which took place on the 11th of November.

Dissection. The vessels of the dura mater were distended with blood, and from the brain opposite to the *left* ear, there issued nearly five ounces of pus. All the rest of the brain was sound, the vessels being much dilated. The petrous portion of the temporal bone was carious, and a communication existed with the external ear.

The question here occurs, did the inflammation, in this case, commence externally or internally? M. Lallemand thinks it improbable that an inflammation of the brain should extend itself to the temporal bone, in such a manner as to form for itself an opening into the ear—whereas we have numerous instances on record, to show how readily an inflammation of the ear produces caries of the bone, and spreads to the membranes and substance of the brain.

Our author next quotes a case from the Medico-chirurgical Journal (1st series, Oct. 1819.) as extracted from the Dublin Hospital Reports, and there published by Dr. O'Brien of Dublin. We need only refer our readers to the original case, or to our analysis of it in the number above mentioned.

Case 13. This case is quoted from Sedillot's Journal, vol. 45, and has been communicated (to some of the English periodicals, we suppose) by our distinguished countryman, Mr. Brodie.

A youth, about fifteen years of age, subject to vertigo from his infancy, learnt with difficulty, but retained what he learnt with wonderful tenacity, and appeared endowed with a sound understanding. At the age of two years, he became deaf of the left ear, in which a suppuration and discharge were established. In 1809, he being then in his 15th year, there appeared a small fungous excrescence at the bottom of the meatus externus, to which the unguentum nitratum was applied, with the effect of stopping the discharge in 15 days. At this period commenced an acute pain in the head and ear. The ointment was discontinued—the discharge returned, and the pains ceased. Some time afterward, the ointment was reapplied, and the discharge again interrupted. On the 8th day after the cessation of the discharge, the boy became affected with such acute pain in the head, that he was forced to cry aloud, and said he would certainly go mad. In the course of a few days he suddenly became insensible, with dilatation of the pupils, slowness of the pulse, and other symptoms of cerebral compression. He died in a state of coma.

Dissection. Vessels of the dura mater gorged with blood, as also those of the pia mater and arachnoid, which was quite dry on its surface. Two ounces of serum in the ventricles. In the *left* hemisphere of the brain, a cyst was found three inches in diameter, consistent and vascular, containing thick purulent matter. The inferior extremity of the cyst rested on the petrous portion of the temporal bone, and a small opening of communication between the ear and the cyst existed, the bone being carious. The cerebral substance surrounding the cyst was yellow and much softer than natural.

Case 14. Our author next quotes a case, as published by Dr. Parkinson in the MEDICAL REPOSITORY for March 1817, under the title of *Hydrocephalus*, but which M. Lallemand very properly thinks might have received a more appropriate designation. The patient was a youth of 14 years, who had, for some time, experienced violent accessions of pain in his head and right ear, from whence there was sometimes a discharge of purulent matter. This discharge increased, and became both fetid and sanguinolent. The little patient got weaker and weaker, had attacks of convulsions, fell into a state of insensibility, with dilated pupils, slow pulse, &c. in which state he died. On dissection, three ounces of fluid were found in the ventricles, and a small abscess in the middle lobe of the right hemisphere of the brain, communicating with the ear by a carious aperture in the temporal bone, through which a sound could be introduced into the meatus externus.

Case 15. (From M. Itard.) G. R. aged 22 years, being harassed by a severe toothach, had several attempts made by a surgeon to extract the tooth, but without success. These attempts exasperated the toothach—fever supervened—and a more expert surgeon being found, the tooth was removed. But, the febrile symptoms and pain still continuing, the patient was sent to the hospital, on the 6th of October. The pulse was now full and bounding—there was some delirium. Bleeding and some other means were employed. On the 10th October, a purulent discharge from the ear took place, but the symptoms continued, and the patient died on the 4th of November.

Dissection. Besides several marks of inflammatory action in the brain, the auditory nerve of the right side, both portio mollis and portio dura, was found in a state of suppuration, and a quantity of pus collected in the meatus auditorius internus and externus.

Case 16. (From the same.) Peter Remy, aged 60 years, an hæmorrhoidinarian for 40 years, was taken in the spring with a slight sore throat, which was soon dissipated; but, in a few days, succeeded by a most severe pain in the right ear, unmitigated by fomentations and other anodyne applications. After three days of inexpressible sufferings, a purulent discharge took place from the ear, which brought relief to the pain, and this discharge continued to flow, for twenty-one months, with some temporary interruptions, during which the pain returned. After this period, the patient began to experience some formidable symptoms, as sense of weight in the head, nausea, furred tongue, fetid breath, small pulse, deafness in the right side, from the ear of which side, a very acrid, fetid, and corrosive discharge issued. This discharge abated, or even stopped occasionally, and then the headach increased, or delirium occurred. At length the patient sunk, with all the symptoms of cerebral affection.

On dissection, there was found a considerable quantity of pus in the affected ear—the sinuses of the dura mater were gorged with blood—the latter member, where it covered the petrous portion of the temporal bone, was thickened, discoloured, and pierced in several places. There was much fetid pus between the dura mater and bone, and an encysted abscess, containing inodorous pus, in the middle lobe of that hemisphere. The bone itself was carious, and all the internal parts of the ear disorganized, and full of pus.

M. Lallemand thinks that all the symptoms of this case go to show, that inflammation commenced in the ear, and spread from thence to the envelopes and substance of the brain.

Case 17. M. Le Blanc, being at the mint, had the imprudent curiosity to place his head so close over one of the moulds into which a man was pouring melted silver, that he felt like a sudden electric shock, that deprived him of sensibility, and was followed by constant headach, and sense of weight about the brain. On the 6th day there was complete deafness. On the 8th, violent cephalalgia, and sensation as if the bones of the skull were forcibly separating, with fever, hard pulse, &c. During the next seven days, the patient was bled eleven times from the arm and jugular vein, with temporary relief. Till the 15th day, the pains were so violent, especially in the evenings, as to occasion spasmodic movements in the muscles of the face, and in the arms and lower extremities—insomnium—subsultus tendinum—small pulse—sense of extreme weight in the head. In the course of the next fortnight, there was a slight diminution of the pain in the head, the other symptoms continuing the same. The seat of this pain appeared to Le Blanc himself to indicate the existence of a purulent depôt between the dura mater and the left parietal bone, and he became convinced that there was no other chance of delivery than by trephining the part. Lecat, his friend, was summoned for this purpose; but an hour before his arrival, the patient fell (for the first time during nearly 56 days) into a sound sleep, on awaking from which he found his pillow covered with pus, which had drained from the left ear in a stream, and gave complete relief to the patient's sufferings. During fifteen days, the discharge was constant and considerable; but after this period, it gradually decreased, although it required more than two years of convalescence to restore him to health. During this convalescence, there was more or less discharge from the ear, and whenever by accidental circumstances, this discharge was arrested, there arose a train of unpleasant symptoms that threatened serous consequences.

Case 18. Joseph Prevot, 40 years of age, received a violent blow on the right cheek, for which he was treated at the St. Louis hospital, and soon discharged as cured. Nine months afterward, and without any apparent cause, he began to experience acute pain in the forehead, followed by delirium. He was bled and had an emetic administered, and in about a fortnight, 17th July, he was sent to the HOTEL DIEU. The delirium was violent, agitation extreme, face flushed, conjunctivæ inflamed, tongue dry and rough, skin hot, pulse hard. Bled to 12 ounces. 18th. The symptoms increased in degree. Leeches to the temples, and another general bleeding. 19th. Coma, which continued till the 23d, when the patient died.

On dissection, the arachnoid membrane was found adhering by a gelatinous layer to the dura mater—the lateral ventricles dilated to double their natural size, but not containing much water—the lining of the ventricles covered with granulations—at the inferior and posterior part of the cerebellum, between the pia mater and arachnoid, there was a tumour the size of a small egg, enclosed in a cyst, and containing several grumous clots of blood in a decomposed state. The surrounding portion of brain was of a greenish yellow colour, and the adjacent bone was carious.

Case 19. (From Professor Frank.) Jean Otto, 26 years of age, experienced for several years, an obstruction or embarrassment in the head, and particularly in the nose, accompanied with acute pain extending towards the right temple. After some time, a discharge began to take place from the nostril of that side, consisting of sanious matter mixed with blood. In about nine months afterward, a thin lamella of bone was discharged, but pain in the head, and swelling of the nose continued, and a discharge began to issue from the other nostril, from which also a carious piece of bone was thrown off. Paralysis of the left side next took place, and the patient died in a few days.

The upper part of the brain was in a good state, but in the lateral ventricles was found a thick ichorous matter. Before the sella turcica and under the decussation of the optic nerves, there was a perforation of the skull that would admit a nut, and filled with purulent matter, which had communication also with the nose.*

We have now presented our readers with the principal facts or cases contained in this volume, and have only to take some notice of the observation which M. Lallemand has added in conclusion.

He thinks it results from the cases narrated, in this and the preceding letters, that in abscesses of the brain (provided the patient survives long enough) a cyst is organized around the pus, as around any other foreign body which is placed long in contact with living tissues, as, for example, in cerebral hæmorrhages, gunshot-wounds, &c. It is reasonable to suppose that the period at which a cyst begins to become organized in these cases, varies according to the more or less rapid march of the inflammation; but it is always to be borne in mind, that chronic inflammations often produce extensive alterations in the cerebral mass, without exhibiting any symptoms that might lead to a suspicion of their existence. Nevertheless, where the cases have been carefully observed, and the symptoms and dissections accurately noted, our author has found a considerable relation between the duration of the disease and the progress of the organization in the cyst. For instance, in a case where death took place thirteen days after the first symptoms appeared, the parietes of the purulent depôt were already lined with a soft and somewhat vascular membrane. In another case, of eighteen days, the same thing was observable. At the end of 37 days, the cyst was white and easily lacerable, resembling concreted pus. At 53 days, the membrane was soft and vascular, more distinct than in the other cases, but not sufficiently tenacious to be dissected out without laceration. At the end of two months, the cyst was smooth, perfectly circumscribed, presenting exteriorly several layers of cellular substance, and internally exhibiting a soft mucous surface, resembling that of an old abscess in any other part of the body. At three months, the sac, still more vascular, had a denser structure, and a more considerable thickness. Finally, after some years duration, the exterior presented several cellular layers—the centre a dense tissue, thick, and apparently fibrous—internally, all the features of a mocous membrane, somewhat inflamed.

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* A nearly similar case was opened some time since, by Mr. Baxter and the Editor of this Journal. Mr. B. it is hoped will publish the case.

It appears then, that the work of organizing a barrier around a purulent depôt, may be carried on for years with uninterrupted activity. Is it then, says our author, to be wondered at, if this foreign body should become a constant source of irritation and of determination of blood to the parts, inducing ultimately an organic alteration in the neighbouring structures.

1. M. Lallemand observes, that hitherto little importance has been attached to the alterations produced in the neighbourhood of the encysted abscess; and yet, he thinks, that death is rarely occasioned by the said abscess alone: as it is, in fatal cases, almost always accompanied by acute inflammation of the surrounding cerebral substance, a chronic inflammation of the arachnoid covering.

2. Here arises a question—Is a cure possible, in the event of an encysted abscess of the brain?—Or, in other words, is the pus contained in such an abscess ever absorded? This is a problem which, perhaps, can never be solved by direct observation. Analogy, in cases of cerebral hæmorrhage, would lead us to expect, that absorption is not impossible: by the structure of the lining membrane of the purulent collection (being that of a mucous membrane) must render it more disposed to exhalation than absorption in general—more likely to augment than diminish the contents of the cyst. Neither are these kinds of structures capable of forming adhesions one with another, even if their contents were absorded.

3. To what our author has said in former letters, respecting the general causes of chronic inflammation of the brain, he has nothing to add in this, excepting caries of the skull, and especially caries of the temporal bone. This cause, he considers to be so common, so powerful, and so little suspected, that he has thought it right to dedicate a large portion of the letter before us, to its investigation, and to diseases of the ear in general.

Acute otitis, he remarks, is rather more frequently seen before than after puberty; but both sexes and all temperaments seem equally exposed to its causes. External otitis is often produced by the extension of some cutăneous affection to the mucous membrane of the meatus externus—more particularly in variola. In such cases, the inflammation very readily spreads to the interior of the ear, too often inducing caries of the bones, permanent deafness, or fatal affections of the brain itself. Among the accidental causes, cold, applied suddenly to the ear, through the medium of a stream of air, is one of the most common. Internal otitis very frequently takes place in the latter stage of fevers—not, he observes, as a critical turn of the disease, but because fever is, in fact, inflammation of the brain, and the ear, being so contiguous an organ, is more frequently found to suffer than any other.

External otitis, less formidable than internal, is distinguished by the suddenness of the discharge after the pain has commenced. On the second or third day, the lining membrane of the meatus externus is red, tumefied, and covered with pus, or a puriform secretion. In internal otitis, on the other hand, the lining of the meatus continues dry during several days, and at length the discharge comes on all at once, and is very profuse. This discharge, in such cases, makes its way through the eustachian tube, and continues to flow through that channel.

Internal otitis, is often accompanied by symptoms similar to those appertaining to inflammation of the brain or arachnoid membrane—with which, indeed, it is not seldom complicated, so as to render the diagnosis extremely difficult. Thus, in otitis, the pain is not always confined to the ear, but sometimes extends to the whole head, being more or less violent, lancinating, and compressive. The connexion of the portio dura of the auditory nerve with so many other nerves, may explain the spasmodic affections, and many other symptoms, accompanying inflammation of the internal ear.

Otorrhœa, or chronic catarrh of the ear, is often the consequence of otitis acuta. But in whatever way it commences, it generally ends by affecting equally the meatus externus, and the membrana tympani. The mucous membrane becomes thickened, red, and sometimes bloody—the cavity of the meatus diminished—the membrana tympani destroyed or perforated, as shown be the passage of air or other fluids through the ear. The disease too often ends in caries of the bone, and inflammation of the brain or its membranes. The physician, therefore, who is called in to treat this disease, should employ the most energetic means from the very beginning, if he wishes to ward off the fatal catastrophe which follows, if these means be not used. To otorrhœa our anthor has found the scrofulous constitution most prone, as also those constitutions which have been much affected with cutaneous diseases. The smell, colour, and consistence of the discharge vary much in different individuals, and in the same individual under different circumstances. It is generally diminished under the influence of a dry and warm temperature, exercise, and low living. In simple cases, it will entirely disappear under these. It is easily renewed or augmented by the reverse of the above, and especially by cold and moisture, too much intellectual exertion, and excesses of the table.

Sometimes the sudden suppression of the discharge is purely mechanical, as, for instance, when crusts form at the bottom of the meatus, from desiccation of the viscous matter—when ointments are crammed in, and form plugs, confining the discharge —or, finally, where polypous vegetations present an obstacle to the egress of the purulent secretion. In all these cases, if the matter does not make its escape by the eustachian tube, there arises a sense of tension, weight, and pain—and sometimes symptoms of compression of the brain.

Occasionally, the discharge from the ear ceases, in consequence of some other operation going on in the system, as the epoch of puberty, pregnancy, &c. at others in consequence of some pathological fluxion or determination to a particular organ. Thus, our author has seen these discharges alternate, with attacks of rheumatism, catarrhus vesicæ, leuchorrhœa, &c. In some cases, the new disease is so violent, that it may be desirable to re-establish the aural discharge; but this, he thinks, can seldom be necessary, or safe. It is much better, he observes, to institute another drain by seton, and to adopt a rigid antiphlogistic system of treatment. The most dangerous metastasis, is that to the membranes or substance of the brain. When this has lasted but a short time terminating quickly in death, no trace, he avers, of its existence, may be cognizable on dissection. When the inflammation has lasted but a few days, a softness only will be found in the brain, generally corresponding with the petrous portion of the temporal bone. When prolonged beyond this period, an abscess will be usually detected, the matter of which is fluid in the centre, and pulpy at the circumference. But it is not always in the corresponding hemisphere that this abscess exists—sometimes it is in that opposite to the diseased ear—proving, he thinks, a real metastasis, and not merely an extension of the disease of the brain. Inflammation of the arachnoid, he has rarely found to terminate by adhesion, but by a serous or sanguineous effusion, with some alteration in the texture of the membrane itself.

Otorrhœa then, however benign at the beginning, if neglected or maltreated, generally goes on from a mucous to a purulent, and ultimately a thin sanious discharge of that peculiar fetor which always accompanies caries of a bone. The fragments of ossicula auditus come away first, and then small particles of the temporal bone itself. The affair is now very serious. There is another kind of otorrhœa, observes our author, more rare more insidious, and almost unknown—it is that which takes place through the eustachian tube. The patient experiences a dull pain in the region of the ear, sometimes fixed, at other times shifting about—sometimes constant, at others intermitting. He feels a tinnitus aurium—hears a continual buzzing noise, like that of a mill, or a water-fall—is hard of hearing, and afterward becomes quite deaf for a time—then recovers the auditory powers, with the noises above mentioned. This loss and recovery of the auditory functions depend, he thinks, on the accumulation in, and discharge of matter from the tympanum. The patient has a bitter taste in his mouth, a fetid breath, occasional nausea, or vomitings of fetid matter—with expectoration of the same in violent fits of coughing. He also takes a distaste against, or even nauseates his food—loses his appetite—becomes despondent, and emaciates from day to day, without his medical attendant knowing why. Generally, these symptoms are attributed to an affection of the stomach or lungs. Medicines are given with this view, but, of course, without effect. The caries goes on—the membranes of the brain become affected, and death closes the scene.

Sometimes the sanious otorrhœa is accompanied by firm, yet fungous excrescences, which frequently bleed on the least touch. The attempts to cure these by extraction, cauterization, caustics, or desiccative ointments, generally increase the evil, and produce disastrous consequences. These vegetations are prolongations of the membrane of the tympanum, or of the dura mater itself. They are produced by the same causes which produce caries, and resemble those fungosities which are developed on the surfaces of carious bones. They are to be distinguished usually from polypi, by the symptoms which have preceded them, and by the nature of the discharge attending them. Polypi are commonly accompanied by an abundant discharge; but it is of a mucous nature, and does not discolour the silver probes, or other instruments.

In pursuing the ravages produced by caries, it will be seen that it (caries) does not affect indiscriminately all parts of the temporal bone—but, on the contrary, that it follows the direction of the different conduits that have relation with the cavity of the tympanum. Indeed, when we reflect on the numerous cavities and canals in the temporal bone lined with a continuation of the same membrane, we cannot wonder at the frequency of caries, even in its petrous portion. Of all parts, however, the mastoid process is the most frequent site of caries, and after that the petrous portion of the bone, in the vicinity of the semicircular canals and vestibulum.

When the caries has once penetrated to the dura mater, or the inflammation of this membrane has extended to the arachnoid, or brain, then a fluxion or determination is made towards the centre of the sensorium, which not uncommonly suspends that which has previously existed towards the ear. Then it is that the discharge ceases, or becomes notably diminised. Dissection shows the dura mater destroyed, covered with pus, or lying in contact with an abscess.

We have now turned over the last page of the work before us, and have endeavoured to compress into a moderate article, almost the whole substance of the book. M. Lallemand does not enter upon the treatment of this insidious and dangerous disease, but refers to M. Itard's work, as the best on the subject of aural diseases. We have seen several cases that might have been reported here with advantage, but we hope the gentlemen themselves who had the immediate charge of them, will lay them before the public. We think we have said enough to put the reader on his guard, when he has a disease of this description to deal with, and that this short article will stimulate him to a more careful observation of otitis and otorrhœa than he has formerly been in the habit of bestowing.

II.

Transactions of the Medico-chirurgical Society of Edinburgh. Vol. I. Edinburgh, 1824.

[Second Analytical Article.]

Art. I.

Appearances observed in the Dissection of two or three Individuals presumed to have perished in the Storm of the 3d of November, 1821, *and whose Bodies were discovered in the Vicinity of Leith, on the Morning of the 4th of the same Month;—with some Reflections on the Pathology of the Brain.* By George Kellie, M.D. &c.

Saturday night, the 3d of November, 1821, was remarkably cold, tempestuous, and dark;—next morning three individuals were found dead, and extended on the ground, in the vicinity of Leith. One of the three was recognised by his friends, and removed:—the others became the subjects of medico-legal examination. Drs. Cheyne and Kellie inspected the bodies. One was a middle-aged man, perhaps 40—the other an elderly female. The external appearances of the man presented nothing remarkable. The body generally might be described as presenting more than usual freshness and soundness. When the scalp was divided, very little blood flowed from the integuments. The dura mater was somewhat congested, suffused, and heightened in colour. Its sinuses were loaded with dark blood. Veins of the pia mater were turgid and injected. Milky serous effusion between the pia mater and arachnoid. Cerebrum, in texture and colour, sound. Between three and four ounces of serum in the ventricles, and at the base of the brain. *Abdomen.* Small intestines very deeply coloured—especially the ilium, which was red, and presented a fine specimen of vascular congestion. No appearances of this kind in the stomach or colon, the former of which was nearly empty; its mucous membrane presenting a few spots of a coffee-colour. Liver congested. No other morbid appearances in the abdominal viscera.

The female appeared beyond the age of sixty. No blemish, or external injury. The veins of the dura mater were injected, and its sinuses loaded—vessels of the pia mater congested—three ounces of serous fluid in the ventricles, and at the basis cranii. On raising the omentum, "the small intestines exhibited precisely the same appearances as in the man; the same redness, not in patches, but over the whole extent of the bowel, and occasioned by the same general and minute injection of the vessels, profusely ramified beneath the peritoneal coat." The stomach and colon, in this case also, were of the usual pale colour—the former containing a few ounces of viscous fluid, and some fragments of undigested beef. There were a few purplish spots on the mucous membrane of the stomach. No other unusual appearances.

Medico-legal Report. Our authors stated their conviction that the above unfortunate victims had not fallen in consequence of any violence or external injury—but that they perished from the severity of the weather.

During the said night, there was a furious gale from the northeast, accompanied by rain, sleet, and snow—circumstances that would greatly augment the benumbing influence of the cold (which, in itself, was not below the freezing point) if the individuals, benighted, fatigued, and worn out, gave up exertion, in despair of finding their way, and lay down to sleep—alas, to wake no more!

Some traces were ascertained of the history of these individuals; and it appeared probable that all three had lost their way, and were exposed to the dire effects of the storm, from an early hour in the evening. Being Saturday night, when the lower classes receive their wages, and when there is a kind of periodical propensity to indulgence in spirituous potations, it is not impossible that these poor creatures might have been, in some degree, intoxicated—but of this there is no proof.*

Our author has not been successful in finding more than one recorded dissection of persons dying from the effects of cold. We have also tried back, and with the same want of success. We apprehend, however, that there must be some cases on record, though we have not been able to find them. The case quoted by Dr. Kellie, is from the sixth volume of Haller's Disputations—and in it "*the vessels of the brain were observed turgid with blood, and in the ventricles was found an effusion of serous lymph.* The *physiological* effects, however, of a very low temperature on the human frame, are well known, and have been repeatedly described, from Galen down to Bankes, Humboldt, and Parry. They bear a striking resemblance to the symptoms observed in the order comata. Cullen, considering cold as one of the causes which produce apoplexy, does not suppose that it does so by *compression*, but by destroying the mobility of the nervous power. In the three cases above alluded to, there are pretty evident proofs that compression must have existed. Congestion of vessels, and effusion of fluids could not easily take place independent of compression—or rather, of *pressure*. Here, our author enters into a consideration of the peculiarity of the circulation within the head. It is evident that, as the brain is enclosed within a long case, and in itself nearly incompressible, there can only be the same, or very nearly the same quantity of fluids at all times within the cranium. Thus, if the arterial system be surcharged, the venous must be proportionably depleted—if an effusion of six or eight ounces of serum or blood take place, there must be a corresponding quantity of blood forced out of the head. All this, we think, is unquestionable, and required not the algebraic proofs which Dr. Kellie has brought forward. But compression is one thing, and *pressure* is another—at least, there is no necessity that the *former* should exist where the *latter* obtains. Allowing the brain to be completely incompressible (which it is not) a strong action, and full state of the general vascular system, must cause more *pressure* on it than a weak and depleted condition of the heart and arteries:—and thus it is that we relieve the head from *pressure*, without perhaps altering, in any appreciable degree, the actual quantum of blood circulating through its vessels. But there is another point of view in which we should regard vascular turgescence and effusions. On opening the heads of those who have died with symptoms of compression, or pressure, we generally, if not always, find certain parts of the vascular system of the brain more distended than others. Here then we have *unequal pressure* on the encephalon, which inequality of pressure, indeed, is pretty well indicated by the inequality of functional disorder manifested before death. In cases of extravasation of blood or other fluids into the natural cavities, or into lacerations of the brain, must not this local, unequal, or partial pressure be still more operative, even if there be not a drop more of blood at this than at any other, within the cranium?

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* Although vinous and spirituous potations appear to have the effect of enabling us to resist the impression of cold, at least for a time, yet, as they greatly augment the tendency to somnolency, they would, under the circumstances above detailed, contribute to the fatal event.—Rev.

Here Dr. Kellie has criticised Dr. Abercrombie's doctrine, on this point, in almost the very words we used at p. 10, 11, and 12 of the first number of our Analytical Series, for June, 1820. Dr. Kellie has made a considerable number of experiments on animals which he bled to death, or poisoned, with a view of ascertaining whether, and how far, the vessels of the brain could be depleted by detractions of blood *usque ad mortem.* The result of these experiments may be thus stated.

> "That though we cannot, by any means of general depletion, entirely or nearly empty the vascular system of the brain, as we can the vessels of the other parts of the body, it is yet possible, by profuse hæmorrhages, to drain it of a sensible portion of its red blood;—that the place of this spoliation seems to be supplied both by extra and intravascular serum, and that watery effusion within the head is a pretty constant concomitant or consequence of great sanguineous depletion.
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> "If, instead of bleeding, as in our examples, 'usque ad mortem,' we were to bleed animals more sparingly and repeatedly, I have no doubt that we should succeed in draining the brain of a much larger quantity of its red blood; but in such experiments, we should, I think, find a larger effusion of serum, and be satisfied that many vessels, destined to circulate red blood, were filled with serum only, and even the longer trunks with a very thin and diluted blood." 116.

So in a case of exquisitely marked anemia, examined by Dr. Combe and himself, although very little blood was found in the vessels of the brain, or its membranes, "yet they contained more than the usual relative quantity of fluid which had circulated during life; a pale and colourless blood, it is true, but in such quantity within the head that, had it been less serous—more highly coloured—more, in short, like true blood—the vascular system of this brain would have presented little more striking or remarkable to the eye of the dissector, than a somewhat less than usual turgescence, perhaps, of the sinuses and larger vessels, and a profusion of effused and interstitial serum.* This brings our author to the second part of his paper—"Reflections on the Pathology of the Brain."

Having shown that there are natural obstacles to the free depletion of the brain, not existing in any other part of the body—that we cannot, in fact, materially lessen the quantum of blood within the cranium, by profuse venesection, without leaving an equivalent to this spoliation in an increase of serous effusion, serving to maintain the plenitude of the cranium, it seemed reasonable to our author, that, by removing a portion of the skull, the defence from the pressure of the atmosphere would be taken off, and we should thus succeed in producing a much greater depletion of the cerebral vessels, by general blood-letting, than could otherwise be effected. In order to prove this, three dogs were trepanned, and then bled to death. The brain was depressed or shrunk in at the place of perforation of the skull, and the vessels internally were found depleted.

We may just remark that, whatever might be the result of experiments of this kind on animals, they would be perfectly impracticable on man—and for this reason, that, unless the dura mater was detached from the skull, to which it so strongly adheres, no action of any consequence would be produced by the removal of a circular piece of bone.

The same causes which prevent depletion of the cerebral vessels, ought also to prevent over repletion. The subject of hanging and drowning is brought forward by our author, in illustration. It is evident that the rope prevents the return of blood from the head by the veins, and cannot prevent the transmission of blood along the vertebral arteries, at least, if it could gain admission into the cerebral vessels, after the suspension commences. Dissection, in such cases, does not show the cerebral vessels particularly injected; nor, indeed, do we think this injection could be fairly expected. The interruption to the venous return of blood, lasts only a few minutes—the flow of blood along the carotids, must be nearly, if not entirely stopped by the ligature—the vessels of the brain are healthy—and finally, what might be injected into the vessels of the brain, by the vertebral arteries, during suspension, may be very fairly supposed to recoil from the vessels, when the ligature is taken off, and before the head is opened.† Dr. Kellie offers a curious argument against this conclusion—namely, that as "the cord is never removed till the subject is cut down, and laid in the horizontal posture, the blood can have no tendency to gravitate toward the heart." What, are we to count for nothing the elasticity of the arteries, if over-distended?—How does Dr. Kellie account for the rush of the blood from the vessels at the base of the skull, when the brain was removed, as stated by himself, at the bottom of page 133?—besides, we are informed by Dr. Kellie, who himself examined the necks of people who were hanged, that the noose slips up on one side of the neck, behind the ear, "and there is, consequently, a space on this side, corresponding to the rising of the noose, *which is not embraced by the cord*, and where the veins, returning the blood from the head, *are subjected to little, if any pressure.*" If this be the case, how should we expect to find congestion of the cerebral vessels, knowing, as we do, the free communication between the sinuses of the brain, and the readiness with which the blood would be returned by one of the internal jugulars.

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* See the details of this case, in the next paper, analyzed.

† The same remark we find to be made by Morgagni, Epis. XVIII. 11.

Our experience does not coincide with that of Dr. Kellie, on the following point.

> "Some diseases of the heart, and of its larger vessels, constitute cases in which we might expect to find the brain more plethoric and congested than usual. In obstruction of the auriculo-ventricular valves, an obstacle exists to the free return of the venous blood from the head; and in muscular enlargement of the heart, not unfrequently complicated with contraction of the descending aorta, the impetus of the blood upon the brain is often powerfully increased. Sometimes, too, these conditions either of which seem so well calculated to produce fullness and congestion of the vessels within the head, are found united in the same case, obstruction, viz. to the return of venous, and increased impetus of arterial blood. Yet, I believe it will be found that, in a sound condition of the brain and its vessels, such diseases of the heart have little or no tendency to produce lethargy, palsy, or apoplexy, nor by consequence plethora, congestion, or disordered circulation within the head, although the livid, bloated, and sometimes swollen countenance, and the turgid and throbbing neck, bear ample testimony to the existence of plethora, obstruction, and congestion, in the vessels exterior to the cranium. Of the several cases of enlargement, and of other structural diseases of the heart, which have come under my own observation, not one of the patients had lethargic or apoplectic symptoms. One only had a partial paralytic affection of the right arm." 141.

We have seen several cases where there was every reason to ascribe the affection of the head to the hypertrophy of the heart —and our readers know, that this connexion is very universally admitted by Continental writers.* Another phenomenon, which almost every practitioner must have observed, is the irritability and irascibility of patients with active aneurism of the heart, and consequently, great impulsion of blood on the brain. Indeed, the case brought forward by Dr. Kellie, in corroboration of his own doctrine, militates, in our opinion, against it. A gentleman who had been for some time ailing, complained to Dr. Kellie of inability of forming the letters in writing, which disability was accompanied by "headach and vertigo," relieved by bleeding, and other evacuations. Soon after this, decided symptoms of enlargement of the heart, and aorta came on, which ended fatally in a short time. The heart was found to be double its natural size, as was also the arch of the aorta. The head was not examined.

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* Baglivi was, we believe, the first to notice this connexion, when relating the case of the celebrated Malpighi—then Gibellini, and Lieutaud. Richerand distinctly

In another case of enlarged heart, our author notes the following phenomenon.

> "On looking upwards, to the whitened ceiling of a room, he saw a darkened spectrum, which vanished and reappeared with great regularity. It was soon discovered that the appearance of this umbra was synchronous with the systole of the heart, so that he used often, in my presence, to count his pulse with the utmost precision, by keeping his eye fixed on the ceiling, and numbering every appearance of the spectrum." 144.

It is very true that the greater number of organic diseases of the heart will come to a fatal termination before they occasion such disease in the vessels of the brain, as to lead to apoplexy. And, again, there are many diseases of the heart, caused by puckering or narrowing of the root of the aorta, in which case, there would be no violent propulsion toward the head, but the reverse.

Considering that Dr. Kellie acknowledges that *pressure* may be made on the brain, by general plethora, or excessive action of the heart, although there may be no increase of blood in its vessels, we were, certainly, a little surprised, at the following passage, in page 147 of the volume under review.

> "Whatever tendency such diseases of the heart, and larger vessels, may have to produce *plethora, congestion, or deranged circulation within the head*, that tendency is opposed and counteracted by the physical

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traced apoplexy to aneurism of the heart, as may be seen in the third volume of his Nosographie Chirurgicale. Legallois has related a remarkable instance of this kind, and still more recently, Richerand has detailed the case of the celebrated Cabanis, who died of apoplexy, while labouring under an enormous hypertrophy of the left ventricle of the heart. But, it is to M. Bricheteau we owe the fullest investigation of this subject. He has brought forward a body of evidence, from clinical observations at the Hotel Dieu, in proof of the connexion between cardiac aneurism and apoplexy, which Dr. Kellie's partial and scanty *negative* evidence can have but little power to invalidate. *See Journal Complementaire, for July* 1819—Rev.

situation of the brain, and the peculiar confinement of its vascular system." 147.

Dr. Kellie endeavours to explain away the connexion between cardiac and cerebral affections, on the principle of *coincidence*, not consequence, and he has made out a very good case, for a discussion in a medical society, but not such a one as shall produce conviction in the mind of the attentive observer. Indeed, when we call to mind the various cases of cardiac disease which have passed under our eye, and recollect their almost invariable attendant—*mental irritability*, we cannot permit the sophistry of *coincidence* to blind us against the host of facts which prove, as far as medical proofs can ever go, the intimate connexion between organic affections of the heart and disturbance of function, at least, in the brain. That long-continued derangement of function generally ends in alteration of structure, no practical physician can now entertain a doubt; and that this is especially the case with the brain, we are convinced from experience.

Dr. Kellie, at page 149, brings forward a case which, he thinks, proves to a demonstration, the entire independence of the two classes of disease. We shall first present a faithful abstract of the case.

A man, *thirty-two years of age*, was admitted into a public institution, on the 9th of January 1823, for the treatment of amaurosis. He had pain in the head, for six years previously, "*though in other respects his general health appeared good.*" On the 7th day after admission, (and apparent good health) he complained of dyspnœa, cough, sickness, thirst, and had quick pulse. On the 9th day, he became comatose, and on the 10th from his entrance he died.

Dissection. Vessels of the brain not particularly distended;—effusion under the arachnoid membrane—brain itself particularly firm throughout—no fluid in the ventricles—the vessels at the basis of the brain were diseased, as the vertebrals, basilar, Circulus Wilisii, being thickened, their coats extremely tough, and some of them studded with spots of ossification. The heart was much enlarged, the ventricles, especially the left, being in a state of active hypertrophy. There was a large polypus in the right auricle, passing into the cavæ.

On an impartial review of the above case, we can see nothing to warrant the presumption that the two diseases were so completely independent and unconnected as Dr. Kellie makes them to be. On the contrary, we should draw a conclusion in favour of their connexion. It is usual to find the cerebral vessels of a young man of 32, tough, thickened, and ossified?—Certainly not. But the circumstance of active hypertrophy of the heart co-existing—and (for aught that is shown to the contrary) pre-existing, comes in as an explanation of so early a development of cerebral disease, which otherwise would be very difficult of solution. We perfectly agree with our author, and it is well known we have always enforced the doctrine, that the immediate cause of apoplexy must be sought, in a diseased state or condition of the cerebral vessels themselves. But then, this diseased condition may be occasioned or accelerated by such a disease, as deranges the circulation of the blood in the head. How frequently do we find the function and structure of the lungs affected by organic diseases of the heart? How often effusions into the various cavities?—Why then should the head be considered as exempt from participation in the disorder of an organ, that exercises such a powerful influence over the whole system, as the heart?

Our author argues that, if in such a condition of cerebral vessels, as detailed above, the enlarged heart was not capable of producing apoplexy, it is not likely it would do so under circumstances of a healthy state of the said vessels. But surely, this is loose reasoning. Did not the patient, after all, die of apoplectic affection?—There is no evidence of his dying of the cardiac disease. The outward phenomena of this disease were so slight, that Dr. Kellie did not know there was any thing of the kind existing till the dissector disclosed it. The man, therefore, died of the disease in the head, and there is every probability that the said disease was accelerated, if not caused by the hypertrophy of the heart. In this case, then, we maintain that there is nothing against, and much in favour of, the connexion of which we are treating.

The remainder of Dr. Kellie's paper is taken up with examples of obstruction to the return of blood from the head, by ligatures, tumours, &c. &c. not followed by compression of the brain; but of these instances we need not speak. The resources of nature are, no doubt, wonderful in compensating for, or obviating, the loss of parts, and the various accidents to which flesh is heir; and if all the remarkable instances of this kind were collected, and arranged on one side, we should have a picture that would represent nature as perfectly infallible, and as no longer requiring the least assistance from art. But when we look at the other side of the scene, and contemplate the host of trifling deviations that baffle both Nature and the physician, we shall be induced to lower our admiration a little of the VIS MEDICATRIX NATURÆ. The whole paper tends to prove what no one, we believe, will deny, that, from the peculiarity of the circulation in the head, little alteration in the *quantum* of fluids permeating its vessels, can be produced by art—but that the *pressure* of such fluids on the brain may be materially diminished by lessening the quantum of blood and other fluids in the general system, and diminishing the force of the heart and arteries. These positions we have, ourselves, long maintained in various parts of this journal, and claim for them no praise as to novelty, for they were long ago maintained by Monro—and probably by many others before him.

> "For," observes Monro, "as the substance of the brain, like that of other solids of our body, is *nearly incompressible*, the quantity of blood within the head must be the same, or very nearly the same, at all times, whether in health or disease, in life, or after death, those cases only excepted in which water or other matter is effused or secreted, from the blood vessels; for in these, a quantity of blood, equal in bulk to the effused matter, will be pressed out of the cranium."—*On the Brain.*

And again, the same author remarks—"the less compressible we suppose the substance of the brain to be, the more readily we understand how the whole of it may be affected by a plethora, or increased momentum of the blood." *Ib.*

Much has been said on the incompressibility of the brain; but we do not know that it has ever been proved. When we reflect on the differences which are presented in different brains—some of them exhibiting the vascular system, arterial and venous, injected, as if with red and blue wax—while the same system, in other brains, appears nearly exanguious, we cannot but conclude that considerably more blood is contained in the one class than in the other. Granting that the substantia cerebri is incompressible, or nearly so, can the same be said of the coats of the vessels, and the cellular substance which surrounds them wherever they penetrate?—We think not. And if not, here is a field for an increased quantum of blood within the cranium, under certain circumstances of plethora, great vascular action, or a debilitated state of the cerebral vessels themselves. In this way, we can conceive that very considerable additional pressure may be made on the brain, to the great derangement of its functions, and ultimate alteration of its structure.

Finally, we may be permitted to express our opinion that Dr. Kellie's experiments and observations have added very little indeed to our previously existing stock of knowledge respecting the *pathology* of the brain—nor is it calculated to make any alteration in the *treatment* of cerebral affections. We are ready to agree, however, with the very able and intelligent author, that the causes which have been enumerated by writers, as tending to produce congestions of blood in the head, have been over-rated—that Nature has guarded against repletion and depletion of the brain (as much as she could)—that while the structure of this organ remains *healthy* and *unchanged*, and its *vessels sound*, those causes are little capable of occasioning plethora, congestions, effusions, or comatose diseases—and, finally, (as indeed we have repeatedly observed ourselves) the great causes of apoplexy, are changes which take place in the brain itself, its vessels or its membranes.

ART. II.

Case of Anæmia.[*] By J. S. COMBE. M.D. &c. &c. &c.

This is the case alluded to by Dr. Kellie, in the paper we have just reviewed. There is something so mysterious and ghostly about this disease, that, in a more superstitious age, patients labouring under it might readily be supposed the victims of some blood-sucking vampyre.

This disease has been described, or alluded to by various Continental writers, but as far as we know, Lieutaud was the first (Medecine Pratique) to give an exact description of it. In the Journal de Medecine, par Corvisart, Leroux et Boyer, vol. I, there is a very full account, by professor, Hallé, of Anæmia, as it affected epidemically, (or rather endemically) the workmen in a coal pit, near Valenciennes. The disease affected the men of one gallery or pit *only*, and it assailed each successive reinforcement of workmen employed there. The gallery was at length shut up—but all who had ever been in it suffered from the disease, although some of them were not seized till three or four months after the closure of the gallery. The air of this coal mine (which was 120 feet below the surface of the earth) was strongly impregnated with sulphuretted hydrogen gas, and also carbonic acid.

The disease commenced with severe colicky pains in the stomach and bowels, tightness in the chest, palpitation, prostration of strength, black alvine evacuations. After ten or twelve days of these symptoms, the pains ceased, the pulse became feeble and quick, skin pale and sallow, debility excessive, profuse sweats. This condition lasted several months, and, in some instances, a whole year. Finally, the first symptoms, in many cases, returned, the abdominal pain being dreadful, with purulent dejections, and sudden death. Four of these patients were brought to Paris, where one of them died. On dissection, the vessels were found almost entirely destitute of blood, and the viscera pale and flaccid. The same was the case in all the other dissections that were made. The only medicines that proved useful, were bark, steel, and nourishing diet.

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[*] *a privative*, and ἁἶμα *blood*.

Dr. Combe's Case. In the month of July, 1821, our author was consulted by Alexander Haynes, who exactly resembled a person just emerging from a state of syncope—his face, lips, and whole cutaneous surface being of a deadly pale colour, while the albuginea of the eye was blueish. His motions and speech were languid—respiration hurried on exertion—pulse 80, and feeble—tongue dry and furred—lips and fauces pale—bowels irregular, generally relaxed—stools dark and fetid—urine pale and copious—appetite impaired—stomach rejects food—constant thirst—no pain in any part. His age is 47, and he has spent his life in agricultural pursuits, and temperate habits. Always enjoyed good health till the present illness, which is of about two months duration. Tonics, mild nutrition, and wine, were ordered. In a fortnight, he felt better, but there was no change in his complexion. In September, and occasionally afterward, Drs. Kellie and R. Hamilton saw the patient with our author; but they could not solve the nature of the complaint. After trying a short sea voyage, and drinking of a chalybeate spring, he returned, in the middle of October, with a loss of flesh and strength, his legs swollen, his skin still exanguious, with great debility. During the two succeeding months, the disease preserved a uniformity of symptoms, but gradually increasing in degree. About the middle of January, 1822, the œdema had become general, to which was added an evident effusion in the chest. He died in a few weeks after this, under symptoms of hydrothorax.

Dissection. Externally, the colour was nearly the same as has been described during life. Not a drop of blood escaped on dividing the scalp—dura mater pale, and presenting but few vessels, which were empty. "Near the vertex, and to the left of the sinus, was a considerable ossification imbedded in the plicæ of the membrane; it was an inch long, rough, and irregular." The pia mater was pale, its vessels containing a pale serum, and a considerable quantity of air; a slight effusion under the arachnoid coat. The substance of the brain was very soft and pultaceous, presenting very few vessels; and there was very little distinction of colour between the medullary and cineritious portions. The ventricles contained about two drachms of serum, and about two ounces were found at the basis. The lateral sinuses were moderately filled with pale fluid blood—the arteries at the basis empty. In the thorax, about three pounds of a lemon-coloured serum were effused—the lungs of a pale gray colour, without any signs of gravitated blood. Pericardium contained about an ounce of serum—heart pale, like flesh macerated many days in water. The inner coat of the aorta was of a fine red colour for some inches, but without any turgescence or ossification. There was no exudation of blood, on cutting into the abdominal viscera; and the spleen was the only viscus which preserved its usual colour. The muscles, throughout the body, were pale like the heart. The arteries were universally empty, as were the jugular, humeral, and femoral veins. The vena cava, about the bifurcation, contained a little blood.

We cannot expect to have any light thrown on the subject of Anæmia, until a most minute scrutiny be made of the state of the digestive organs, thoracic duct, and lungs, in subjects who die of the disease. This can only be done in hospital practice, or in an anatomical theatre.

ART. III.

Case of Hydrocephalus, with bifid Brain. By ANDREW DUNCAN, jun. M.D. &c. &c.

This is a case of extreme rarity, and consequently of proportionate curiosity. In our author's researches (and they have been extensive enough) he has met with no case of bifid brain in a child that survived birth. The infant in question, was a female, and survived seven months, having been seen by Dr. Duncan, and several other medical gentlemen, occasionally. For some time before death, the greatest circumference of the head was 29 inches. All the functions appeared to be natural; but the countenance, and other parts of the body were emaciated. The child could never sit up, on account of the weight of the head—yet she was sometimes lively and evidently received pleasure from being spoken to, or played with. She died on the 1st October, and the head was minutely examined, by the late Dr. Gordon—a sufficient voucher for the accuracy of the dissection.

The dimensions were 28½ inches in circumference—and 16½ over the vertex, from ear to ear. We shall be able to give but very few of the particulars of this examination, which to many people, will appear needlessly minute.

The dura mater adhered closely to the bones, wherever they existed—and where they were defective it adhered to the inner surface of the integuments. It was healthy. The water was drawn off by a puncture, through the most prominent point of the occiput. The quantity was 136 ounces, by weight; transparent, and colourless like spring water. The surfaces of the two hemispheres were separated about 4 inches, except at their anterior extremities. The corpus callosum was wholly wanting, except two white bands, as were the fornix, septum lucidum, and anterior commissure. The ventricles were considerably enlarged, and appeared to form one common cavity with the parietes of the cranium for the reception of the water. The further description, occupying many pages, must be perused by the curious in the original. The following passage will be read with some interest.

> "The case occurred soon after Dr. Gordon and Dr. Spurzheim had published their respective opinions regarding the pathological state of the brain in chronic hydrocephalus, and we proceeded to the examination with the greatest anxiety, fully expecting that the facts would bear decidedly upon the chief point at issue, whether the brain was merely distended and unfolded, as maintained by Spurzheim, or, whether the enlargement of the ventricles was owing to interstitial absorption, according to the opinion of Dr. Gordon. We never doubted that the water would be found within the ventricles. But in this respect we were completely disappointed, for there was neither absorption of the brain, nor distention of the ventricles. The whole brain, cerebrum and cerebellum, weighed 8040 grains, of which the cerebellum was 1200, leaving 6840 for the brain proper, independently of the dura mater, and what Dr. Gordon has called the new membrane, but which I am disposed to consider as the arachnoid coat thickened." 219.

Dr. Duncan has not been able to ascertain the average weight of the brain and cerebellum in infants of seven months of age; but from a table of weights of brains, given by the brothers Weuzel, he conjectures that there was no absorption of brain in the case here related—"and no distention of the cavities of the ventricles." We know not how to reconcile this statement with that of Dr. Gordon himself, at page 212, where he distinctly avers that "the ventricles were considerably enlarged."* Be this as it may, the case does not appear to bear upon the point at issue between Drs. Spurzheim and Gordon, excepting so far as it proved that the power by which the fluid was effused, and which was capable of distending the dura mater, skull, and its integuments, so as to contain nine times its natural volume of contents, did not cause any appreciable absorption of the cerebral substance.

Our author doubts (and with reason) the existence of what authors call external hydrocephalus. We have never seen an instance of it, nor any one that did. In many cases of chronic hydrocephalus internus, as Dr. D. justly observes, the ventricles are so distended, and their parietes so attenuated, that the head becomes translucent as a hydrocele, and the hemispheres form a mere membranous bag, which has often been ruptured in the act of opening the head. The water is then supposed to lie in direct contact with the membranes, and between them and the brain. But this is evidently an error.

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* Although the ventricles made common parietes with the whole cavity in which the water was contained, it can hardly, we think, be said that they did not suffer *distention*, as well as enlargement.—REV.

For many ingenious physiological and pathological observations on the origin of mal-formations in general, we must refer to the original and very able paper itself.

Art. IV.

A Case of Phrenitis, with great cerebral Congestion, successfully treated, in India, by opening the Radial Artery. By J. P. Rhind, Esq. Surgeon of Cavalry.

This is a case of a very extraordinary kind—or rather, it gave rise to extraordinary conceptions in the mind of the medical attendant, and was treated in a most extraordinary manner. Mr. Rhind was called, at midnight, to his native assistant surgeon, who had been "*taken suddenly and dangerously ill.*" He found him in a low muttering delirium, pulse quick, hard, and small—"eyes (query the pupils) much dilated"—lying sometimes quiet for a few seconds, breathing laboriously—then starting up, and vociferously calling on those around him, unconscious of their presence—then again muttering prayers, &c. There was no suspicion of intoxication. While sending off for his lancets, Mr. R. found the pulse sink rapidly, and when a vein was opened, no blood would flow. The same was the case with the jugular vein. The temporal artery being cut, a very feeble stream of blood came forth. The extremities became cold—"and neither his breathing nor the pulsuation of his heart was perceptible." "He was, to all appearance, dead." Mr. Rhind, in order to resuscitate his assistant, laid open the radial artery with a scalpel; "but only a few drops of blood oozed out." Presently, however, the blood came in an uninterrupted stream, which gradually enlarged, and, at length, came *per saltum*, when the native doctor opened his eyes, and after heaving a deep sigh, observed that he was better. He was put to bed, and a slight tendency to relapse being evinced, some more blood was permitted to flow, and presently the doctor was well.

As failure does not necessarily prove mal-treatment, neither does success always prove sound judgment, in the *methodus medendi*. Mr. Rhind being at too great a distance, we beg leave to ask Dr. Barclay, who communicates this paper, and whose extensive experience at the bed side must long ago have rendered him familiar with the phenomena of disease, whether the above complaint of the native dôctor presented the symptoms of phrenitis?—To our apprehension, there is not the shadow of a proof of inflammation of the brain. Such disturbance of the sensorial functions and derangement of the heart's action, we have often, indeed, seen from disordered stomach, and noxious ingesta—yet these complaints are very different from phrenitis. But, waiving all question about the nature of the disease, we again ask Dr. Barclay, whether he approves of cutting the radial artery of a man whose extremities are cold, whose, breathing has ceased, and whose heart no longer pulsated?—Does he conceive that the mere cutting of the radial artery in the above state of syncope, had any thing to do with the resuscitation from apparent death—or the re-excitement of the heart and arteries? The fact is, that the powers of life returned—blood flowed—and the patient got well; but we do aver that the pathology of the disease was misunderstood—and that the remedy was misapplied, in respect to time at least, whatever was the nature of the complaint.

ART. V.

Case of Dysphagia, with Abscess involving the Œsophagus, Trachea, and Lungs. By DAVID HAY. M.D.

In December 1821, a gentleman, aged 54 years, and who had generally enjoyed good health, began to suffer from symptoms of dyspepsia, such as loss of appetite, flatulence, heart-burn, pain after eating, disposition to spit frothy mucus, with costive bowels, and furred tongue. In the succeeding month, he had a feeling of obstruction in swallowing his food, which he attributed to flatulence. In February, March, and April, 1823, he was better, and able to attend to his business. In May, the symptoms became aggravated, the difficulty of swallowing some kinds of food being greater than of others. He now began to complain of pain across the upper part of the right breast—he was sometimes sick, and brought up ropy mucus. A probang was passed into the œsophagus, without difficulty, but occasioned pain at the pit of the stomach. Having gone into the country, he returned in the latter end of July, having lost flesh and strength. His complexion was now sallow, his pulse frequent, bowels constipated. In the beginning of August, he had a feverish attack, with pain in the right breast, for which he was bled, blistered, and purged. About the 6th, he began to cough, particularly on taking food, and at night. On the 24th, he had a rigor, followed by fever—the pain, dysphagia, and cough troublesome. On the 26th, there was complete obstruction in the gullet, and an elastic tube was stopped opposite the upper part of the sternum. A gum-catheter, however, was passed into the stomach. Through this tube nothing could be got into the organ, without being instantly thrown back, threatening suffocation, and inducing violent coughing. He now began to expectorate large quantities of a sero-purulent fluid, having a most offensive smell. He sunk on the 1st September.

Dissection. There was a large abscess in the upper and posterior part of the right lung, comprehending in its parietes the œsophagus and trachea. The œsophagus was destroyed by ulceration, to the extent of half its circumference, and upwards of four inches in its length. An opening had taken place into the trachea, tracing the œsophagus downward, and on lying it open, a line of tubercles, somewhat larger than split peas, and of firm texture, was seen lying immediately behind, or in the substance of the mucous membrane, which, in some places, was slightly abraded or ulcerated. This line of tubercles led to a larger one, nearly the size of an almond, placed on the exterior surface of the œsophagus, near the cardia. A hard mass of enlarged lymphatic glands was found in the angle betwixt the œsophagus and stomach, which must have compressed the opening into the latter. The stomach itself was sound.

ART. VI.

Case of Malformation of the Heart. By W. F. HOLMES, M.D.

The varieties of malformation in the heart are very numerous, and the one related here, though perhaps unique in its appearance, produced effects similar to many others recorded by authors.

The patient reached the age of 21 years, and would probably have lived many years longer, had he led a regular life. He suffered much, however, from palpitation, attended by a peculiar blueness of the cheeks and lips, more remarkable at one time than at another. The palpitation was aggravated by motion, and the dyspnœa, sometimes threatened suffocation. At length dropsy came on, and the patient died. On dissection, the right auricle was found so enlarged as to hold a pint—and the foramen ovale pervious, admitting the point of the little finger. There was also a communication between the right auricle and left ventricle—and no opening between the two right chambers themselves. The right ventricle was very small, and communicated with the left by an opening in the septum ventriculorum, furnished with a valvular apparatus. The course of the circulation, in this case, must have been as follows:—when the auricles acted, the blood was thrown from the right auricle not only into the *left* ventricle, but from that, in part, into the right ventricle, through the opening above mentioned, and from thence it was thrown into the pulmonary artery and so on. There was thus a mixture of black and red blood in the left chambers of the heart, and an imperfect aeration of this fluid in the general circulation.

ART. VII.

Case of Tubercular Disease of the Peritoneum and Omentum, combined with Tympanitic Affection. By WILLIAM MONCRIEF, M.D. &c.

A widow woman, 40 years of age, applied to the New Town Dispensary, on the 5th October, 1821, complaining of loss of appetite, indigestion, constipation, globus hystericus, foul tongue, &c. She said her ailments commenced only three weeks previously, after exposure to wet and cold. On the 10th, when visited at home, she was found with nausea and vomiting, constipation, pain all over the abdomen, but severer in the right hypochondrium and left ilium. The abdomen was very tense and tympanitic; no alvine evacuations for four days. She dragged out a miserable existence till the 31st of the same month, when death put a period to her sufferings.

Dissection. On opening the abdomen, four English pints of serum flowed from it. The omentum appeared reddish and tuberculated, extending over nearly all the abdomen, and firmly attached to the fundus uteri. When turned back, it was found much thickened—in several places as much as half an inch. Both its sides, and also the peritoneum lining the abdomen and covering the intestines, were thickly studded with tubercles. The small intestines adhered to each other, and were slightly covered with a purulent secretion. The covering of the liver was tuberculated, but its substance was healthy. There was scirrhus of the pylorus.

It is evident that the tubercular affection was going on for a much longer time than the patient stated—it was only when an inflammatory condition obtained that she was rendered incapable of pursuing her avocations.

Here we must close our second analytical article. We shall return to this volume in our next number.

III.

SPINAL DISEASES.

1. *Engravings Illustrative of a Work on the Nature and Treatment of the Distortions to which the Spine and the Bones of the Chest are Subject.* By John Shaw, Surgeon, and Lecturer on Anatomy. Folio, pp. 47. Numerous plates. London, May, 1824.

2. *An Enquiry into the Causes of the Curvature of the Spine, with Suggestions as to the best means of preventing, or when formed, of removing the Lateral Curvature.* By T. Jarrold, M.D. 8vo. pp. 147. Two plates. London and Manchester, 1824.

It is pretty evident, from the account of works on the spine (foreign and domestic) which we have laid before our readers, that the subject continues to engross a great deal of professional attention. The injurious effects of what we may term *forced cultivation* of the mind are now become so conspicuous that he who runs may read. But we apprehend that there are two great classes of causes in operation to produce spinal diseases—embellishment of the mind among the upper, and debasement of the body among the lower orders of society. By debasement of the body we mean the effects of sedentary and unhealthy occupations. The extent to which this last cause operates in manufacturing towns, and in all large cities, is beyond calculation or conception. The wide spreading evil among the upper classes will shortly arrest the attention of every observer, and we have no doubt that the evil itself will be ultimately corrected by leading to gymnastic exercises by which the symmetry of the body may be preserved or restored. The ancients paid much attention to the means of effecting this desirable end, and we apprehend that the period is not far distant when the moderns will follow their example.

The letter press of Mr. Shaw's volume is so blended with, and illustrative of the plates, that it is quite impossible for us to offer any specimens here; but we cannot too strongly recommend the work to all surgeons, as containing a most rational and philosophic view of the subject, and pointing out clear and scientific methods of treatment.

In Dr. Jarrold's little volume will also be found much interesting matter, especially as relating to lateral curvature. When this last has existed for any length of time, it is so commonly accompanied by a feeble and emaciated frame as to warrant the conclusion that some specific disease exists—either as the cause or the consequence of the curvature. What is the nature of this disease, Dr. J. asks?—

"Unless this is ascertained, and we know the source, we shall at best but palliate, not remove the evil. Plans of cure have been proposed, without a reference to the cause of the affection they profess to remedy. The eye is struck with the fact that the Spine is bent, and upon this fact, solitary and uncombined, plans of cure have originated. One proposes a well-contrived machine, to bear off the weight of the head, from the part which was protruded. Another proposes to accomplish the same end, by confinement to a horizontal posture for several successive months. A third recommends the carrying a weight upon the head, and by the exertion thus occasioned, to compel the muscles to force back again the yielding parts to their natural position." xi.

All these plans, he observes, relate only to the spine, "as having been mechanically curved, and can have no relation to the cause of the affection." We cannot quite agree with our author on this point. Those who attribute curvature of the spine to debility of the muscles have surely the cause of the affection in view, when they endeavour to restore the muscles to their proper tone. His observations apply indeed to mere mechanical contrivances. These can do little more than prevent the increase of the curvature till anchylosis of the vertebræ has taken place, when, in fact, the disease has run its course. Our author combats the doctrine advanced by Pott, that *scrofula* is the cause of spinal curvatures—and that of Mr. Wilson, that the curvature depends on *ricketts* or *mollities ossium*. He concludes that it is to a specific disease, and not to any modification of other diseases, that spinal curvature is owing—that it admits of the salutary operation of medicine—that it (lateral curvature) may be entirely prevented—or removed, if of recent occurrence.

Between lateral curvature, and curvature from within outward there is much difference. The latter often begins in childhood or youth—sometimes in infancy or manhood. It is sometimes the consequence of accident, but more frequently of constitutional origin. It is generally attended with more pain, though less of indisposition, than lateral curvature. The vertebræ having reached their utmost point of projection and being anchylosed, form one mass, when the disease terminates. The strength and spirits which have been for some time improving, become sufficient for the business of life, and the constitution accommodating itself to existing circumstances admits the attainment of old age.

"When the body is inspected after death, the ligaments and cartilages are, in some cases, the only seat of complaint: these being destroyed, the heads of the superior vertebræ, fall obliquely on the vertebræ below; causing a slight elevation of the spinous processes. This early and natural termination of the disease, may frequently occur, and give credit to any plan of cure that may have been adopted. But it too generally happens, that, as well as the ligaments and cartilages, the bones also are in a state of caries; diminished and ragged like broken teeth." 23.

To machines and the horizontal posture, as remedial of this state, our author decidedly objects, but we cannot follow him through his arguments in opposition to these measures. We must refer to the work itself.

"The period required by the disease to pass through its stages, is as variable, as the curvature is to a greater or less degree extensive. Every year the curve is contracted at its base, and acquires a more conical form, until the disease terminates its course, which in many instances is completed in five years. The increase of the conical form, is determined by the rate, at which the caries diminishes the heads of the vertebræ, and gives them a wedge-like shape. While this process is going on, the ossification is necessarily incomplete, and the danger to life would be imminent, were not the loss of substance in the Spine, compensated by the strength acquired by its becoming a curvature." 28.

Our author, after relating some cases treated by occasional leeching and the internal use of hyoscyamus, soda, and alteratives, proceeds to "curvature of the spine with loss of motion of the lower extremities." To Mr. Pott we are indebted for the first ray of light on this subject. He showed that paralysis and the loss of motion from a diseased spine were distinct and unrelated maladies—but this is all we know. An accidental ulcer that formed on the back of a youth confined with this complaint, led to the use of caustic issues. On this plan of treatment our author makes some critical remarks. Mr. Pott, he observes, does not show on what principle caustic issues act. When they are applied to diseases of the joints, a specific object is in view—the reduction of inflammation and the prevention of suppuration. "But the latter, in caries of the vertebræ, seldom takes place; and did inflammation exist, it would be detected by the various dissections that have taken place. But I am not aware that any such appearances have been recorded." We grant that it is not ordinary or common inflammation that produces caries—but still we cannot conceive how caries can go on without being accompanied by *some kind of inflammation*. Our author grants that "there may be a peculiarity in the malady which issues will relieve—but not as in cases of ordinary inflammation." Dr. J. observes that Pott's plan of treatment has not maintained its reputation. "Their application (issues) has been general in all diseases of the spine, but their benefit extremely limited." Camper and Baynton considered issues as of doubtful efficacy—and this is probably the general opinion.

"Another mode of cure was recommended by Mr. Baynton, sanctioned by many instances of successful treatment. I mean that, of the patient lying down on a couch for a length of time. If the view I have taken of the cause of the loss of motion of the lower extremities, being from the more than ordinarily rapid destruction of the intervertebral substance, and the consequent sudden declension of the vertebræ, occasioning a compression of the Spinal marrow, be correct, there is much propriety and excellence in the plan proposed by Mr. Baynton. Lying on a couch takes off the weight of the body from the diseased part, and retards the declension of the vertebræ; or when a curvature has commenced, and the lower limbs have lost their power, the composure and relief of a couch, enables the system to adapt itself to existing circumstances. And though no change may be made in the form of the Spine, yet such is the effect of the system to overcome obstacles, that, as in cases where a considerable blood vessel is destroyed, the part is kept alive by the smaller ones, and in a little time recovers its full sensibility and power: the same may be said of the nerves, if compressed. At first the effect is considerable, afterward, life and power are gradually recovered. A white washer, learning his business, often complains of numbness of his hands, which being long held above his head, compress the nerves as they pass to the arm: but after some time, the numbness leaves him, and he pursues his avocation with the same ease, as if the arms were not raised above their natural elevation; so easily does the system overcome obstacles gradually introduced." 49.

Our author passes in review the Bath waters—the screw chair—the phosphate of lime, &c. concluding that caustic issues, the horizontal posture—and perhaps some well-regulated machines are the only remedies that have at all maintained their ground. These of course, are only calculated to counteract the consequences, not the cause of the disease. He thinks this last is deserving of attention. Although the opportunities our author has had of gaining a correct knowledge of the diagnostic symptoms of the approach of caries of the vertebræ, and of the means of opposing them have been too limited to pronounce them fully established, yet the public, he observes, are entitled to any remark that may lead to the relief of the afflicted.

"If, with a sense of weariness, there be a disposition to move the legs, and place them in various positions, accompanied by an uneasy sensation in the stomach and bowels, and a shortness of breath on ascending a hill, the state of the Spine should excite attention; but, if to these symptoms be added, a disposition to lie on the face, a countenance pale and gloomy, and a somewhat stiff and measured gait, an unequivocal evidence of the Spine being carious, will soon become apparent.

"In the early stage of the disease, the same means that are employed to restore a ricketed child to health, should be used, and all the vigour possible imparted to the system, by a diet consisting much of animal food, well seasoned with salt; at the same time correcting by medicine, any irregularities in the discharge of the functions of the body. Should the early indications of the disease escape due attention, or be misunderstood, and the commencement of pain in the back, show that caries is somewhat advanced; direct attention ought to be paid to the circumstance. If the vertebræ be not painful when pressed, the application of heat will be very grateful; if pain be excited by pressure, a few Leeches repeated as often as the pain increases, afford considerable relief. I have seldom thought it necessary to apply more than four at a time. Measures thus feeble, can only be beneficial on the supposition that the pain is chiefly occasioned by the swelling of the soft parts that surround the bone; and this is further supported by the patient not suffering acute pain when the back is bent, which must be the case, if the bone was in a state of acute inflammation. With a view of staying the progress of the disease, I have given Ext. Hyoscyami, with sufficient advantage, to induce me to recommend its use.

"When the vertebræ of the neck are the seat of the disease, the affection is manifested before caries has commenced, by the head being inclined to one side; in such cases, the Ext. Hyoscyami has in every instance in which it has been administered, proved beneficial, and in most effected a cure." 59.

Passing over the hip-joint disease, we come to lateral curvature of the spine—a disease certainly differing *toto cœlo* from that which has just been noticed. This is never the effect of accident—is not uniform in its progress—and never commences in infancy. The vertebræ do not become carious—purulent matter is not formed—the ligaments are not thickened—and death does not ensue, as an immediate consequence.

"Another alleged cause is, muscular debility; this opinion is advocated in the recent publication on the subject, and is the theory of the day. The effects of muscular debility cannot escape notice, they are seen in the infirm, in the aged, and the weak; but in them it does not produce a Curvature of the Spine. The body may be bent, the shoulders become round, a staff may be required, but the attitude thus occasioned is not that of an incurvated Spine. If debility be the cause, why is it local, why are the muscles attached to the spine alone affected? are they paralyzed, or is the debility of a specific nature? if so, is it a disease, or by what other means is a local debility produced? The Spine is not drawn from its centre by relaxed and weakened muscles, it is constituted sufficiently strong to sustain the weight and motion of the head, and the action of the muscles, and is not in itself disposed to a change of form. If it be not one office of the muscles to keep the

Spine in its position; which without their effort would diverge, it is difficult to comprehend in what other way a weakness of the muscles can occasion a Curvature of the Spine." 78.

Our author's own opinion is, that lateral curvature depends on "a diseased state of the intervertebral cartilages." This diseased state is, he thinks, a thickening of their substance. "I have frequently seen, (says Mr. Wilson) the intervertebral substance thickened, and with such marks of vascularity, that I cannot doubt of ulceration occasionally taking place in them."

> "Mr. Peter Barrow has favoured me with the following case.
>
> 'Jan. 9th, 1819, I visited Eliza Illingworth, aged nine years, who died a few hours after of inflammation of the chest. For more than eighteen months, this little girl, had been the subject of a curvature of the Spine, which extended to all the Dorsal vertebræ; the curvature was on the left side, and occasioned great deformity. No treatment had been had recourse to.
>
> 'On examination after death, the ligaments of the Dorsal part of the Spine, were slightly affected, but the intervertebral substances were greatly diseased, at some parts, particularly at the convexity, being red, and thickened; and at other parts, being converted into a pale jelly-like substance throughout, they had lost their elastic cartilaginous nature.'" 84.

In the view then which Dr. Jarrold takes of spinal curvature, a specific disease distends the intervertebral cartilages, which the energies of the constitution frequently remove, and the figure suffers only in degree;—in other and more advanced cases, the distention is so considerable as to occasion an uneasy sensation near the part, the effort to relieve which, causes the curvature—the muscles being made to act partially on the spine. On examination after death, we see no disease of bone, cartilage, or ligament. The cartilages and vertebræ are indeed compressed, so as to acquire the form of a wedge—"but this is the consequence, not a cause, the figure thus acquired, being the effect of pressure, not of disease." Nothing therefore that indicates the cause of the curvature appears. "Some cause without (exterior to) the spine bends it—and that cause is muscular action excited by the state of the cartilages." Our author being convinced that disease, not debility, originates the lateral curvature, proceeds thus:—

> "But other evidence of the existence of disease yet remains; a curvature is commonly preceded by indisposition, more or less considerable, but without a definite character. After months or years passed in this state, its nature becomes manifest, by the enlargement of one of the shoulders; after which the indisposition diminishes, it being a termination of the attack; and in a few weeks, the shoulder becomes less,

and the health improves; but the original shape is not fully restored, and those who suffer from this one attack, although the Spine be not incurvated, have lost something of the elegance of their figure. But commonly another attack follows. in the ensuing Spring, or it may be at the distance of years, when the flesh again wastes, the countenance becomes pale, the shoulder once more rapidly increases, but the indisposition is unwillingly acknowledged, because it is with difficulty described. All this may be completed in a few weeks, or even days, for the enlargement is not gradual, but sudden, I have seen a decided increase in a single day. Commonly on the third attack the Spine loses its natural position, and becomes slightly curved.

"Between the attacks the efforts of the individual assist those of nature to recover the loss of figure by calling the muscles into exercise which hold up the head, and draw back the shoulders; but the recovery is incomplete, Mr. Ward observes, "That the approaches of the curvature are for a long time scarcely perceptible; but on the occurrence of any particular disturbance of the constitution, such as a febrile indisposition, the spine, in the course of one, two, or three months, is found to yield in a greater degree than it had previously done, during as many years."*

"This is an accurate description of an attack of the spinal disease, and is applicable to every attack which may occur in the life of an individual. The febrile affection, generally amounting only to a sense of lassitude, is not the cause of the curvature, for fever does not affect the spine, but it is consequent on the existing state of the cartilages. Ask an individual advanced in life, whose spine is incurvated, the history of the malady, and the information will be, that the health had never been robust, that repeatedly, without any known cause, there had been an evident loss of flesh, with a sickly countenance, but without much personal indisposition; at other times the indisposition had been more marked. And that at these periods the curvature always increased, and although never in full health, yet there were seasons when there was an increase of spirits, and strength, during which, some progress was made in overcoming the curvature, but again it increased. If the inquiry be extended to others, the result will be, that some had suffered from only one attack; others from two; others from several. Each of which, permanently added to the loss of shape.

"Perhaps the curvature is never uniformly progressive, but is at periods stationary, and then as rapidly advances; it is therefore not mechanical. Neither the weight of the head, nor a relaxation of the muscles, can give it origin; because, their influence being uniform, and constant, so must also be their effects, and it is only by admitting the existence of a disease, that the Phenomena can be accounted for." 92.

The frequency of hereditary curvature of the spine, or disposition to it, is considered by our author as in favour of a specific disease.

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* Ward's Practical Observations, p. 35.

"The first attack is commonly made before the age of fifteen, its approaches are so low, often insidious, and unobserved; exciting at its outset scarcely any feeling of indisposition, at least none are acknowledged, but such as are incident to growth, yet, the individual loses flesh, stoops, is dispirited, inactive, pale; the appetite is impaired, retirement from observation is sought, the deportment and habits are changed, the manners are become careless, ungraceful and spiritless, the temper is irritable, the apprehension dull, instruction is imparted with difficulty, and a spirit of self government, and laudable ambition so necessary in forming a character, attained in a very limited measure. If attention be paid to the form of the person, the cause is ascertained to be an incipient curvature of the spine.

"The shoulder blades are elevated, and prominent, so that the spine appears sunk between them, above them the flesh is considerably increased, and thickened, and is more than naturally firm and elastic. I beg particularly to call attention to this circumstance, as it is characteristic of the disease. In every one in whom I have noticed this appearance, although it may almost spontaneously disappear for a season, it has returned; and a curvature, unless counteracted by medicine, has always been the consequence. I repeat the remark, when the shoulder blades are somewhat elevated, and there is a greater quantity of flesh between them and the neck than corresponds with the flesh on the chest, a curvature if not prevented is inevitable. At this period, a short course of medicine replaces the shoulders in their proper position, and if future attacks, should be made, and be treated in a similar manner, the natural symmetry, and proportion of the figure, will be preserved. Remove the cause by destroying the disease, and nature will restore the figure." 97.

The first attack commonly runs its course unobserved. When over, the carriage of the head is more erect, and the shoulders recover much of their lost resemblance to each other. But still the scapulæ are elevated and project outward, so that the spine is sunk between them.

"A second attack is commonly attended by a sense of sinking at the stomach; a disposition to stoop which is with difficulty overcome; and by a pain under the shoulder-blade, to relieve which, the arm is frequently moved round in a circle, and the point of the shoulder thrust forward; and thus the shoulder-blade is drawn to a greater distance from the Spine, and becomes much larger than that on the other side; alarm is commonly now excited, and attention for the first time paid to the subject.

"This state of the shoulder-blade makes way for, and is the forerunner of the curvature. It will be said that this must be effected by muscular action, granted. By their strength the shoulder-blades are elevated, and drawn aside, and a continuation of the same influence ultimately incurvates the Spine. The controversy is not whether the muscles act, but how they are excited. To place the subject in another point of view; let the shoulders be voluntarily elevated, and projected forward, the trunk will then acquire much the same figure it has in the first attack of the Spinal disease. A little attention to the action of the muscles, will render it no longer problematical by what agency the curvature is effected, but unless the muscles had been excited, they would not have acted, a healthy Spine does not exert this influence, disease in some form is the exciting cause, and I have never been able to detect any but in the cartilages. In the second attack, the fulness at the upper part of the back again is evident; one of the hips also projects, and as has been remarked by some authors, is more than naturally covered with flesh. How far this bears a relation to the state of the shoulders, is not immediately apparent, as the projection of the hip may be supposed to be occasioned by the preponderance of the trunk to the right side.

"Every change in the form of the shoulders, effects a change in the centre of gravity, and consequently in the hips, and thus the air and gait in walking becomes a peculiar and characteristic. The left foot is turned outward, and the knees scarcely bent, so that in walking, the limb is thrown round, rather than directed forward. The attention paid to the dress, much conceals the state of the shoulder; but a slight curvature is detected by the motion of the feet The hip is never the seat of pain, but the shoulder in the second attack, is in no instance free, and is often pressed against the chair, or some other hard substance, to relieve from the weariness of a continued aching. The sitting down is always awry, and the left knee projects. In the subsequent attacks, less of fulness is observable in the shoulders, while the chest acquires a more natural state, but the health is mcre uniformly indisposed." 103.

We now come to the important question of prevention or cure. In bad cases—where the curvature is great and of some standing, it is useless to hope for a restoration of shape. But the health may be restored, and the figure somewhat improved If by bending the body, the spine comes to its proper shape, we may promise a cure. Here our author reviews the various plans proposed by authors and practitioners—and wisely, we think, avoids rejecting any one of them as totally and always useless. From each, some auxiliary assistance may be gained—even from machines, when judiciously applied, some feeling of strength and comfort may be derived by the patient. Darwin advised the horizontal position, during a few hours each day—and this was extended by Baynton into a long and almost uninterrupted prostration for months in succession, in every stage and form of the disease. Success has, in some measure, justified the expectations of these distinguished advocates; but it must be confessed that disappointment has also been no uncommon occurrence.

"When the nature of the disease shall be better understood, the horizontal position will recover something of its reputation; for, as the disease does not from its own nature occasion a curvature, as the gout occasions distortion, the horizontal position must be advantageous as a preventive, or as opposing a further increase, or after the disease has been subdued; but, this position is seldom recommended till a curvature has been formed, and then, it is difficult to comprehend on what principle a cure can be effected. Every agent that can influence the form of the person is at rest, and a spontaneous cure is not probable." 111.

Of Mr. Wilson's plan (carrying a weight on the head) Dr. Jarrold speaks rather favourably. "When the disease has been subdued, this method may be adopted with considerable advantage, especially if combined with that recommended by Darwin; for the muscles, after being strongly excited in supporting the weight on the head, required absolute rest, that the advantage which had been gained, may not be lost in the relaxation incident on fatigue." Dr. J. has very often used Mr. Wilson's method with advantage. Shampooing, percussion, or manipulation, has its use in strengthening the muscles. We now come to our author's mode of treatment—or rather his addition to the modes of treatment already described, for he calls them all into his assistance occasionally.

"It has been my object to prove, that the lateral curvature has its origin in a specific constitutional disease, and consequently requires a constitutional remedy; and, as I before hinted, that there might be some relation between it and bronchocele, I have made use of similar remedies. From ten to fifteen grains of burnt sponge, and from four to six grains of carbonate of soda, and if debility be considerable, twenty drops of nitric acid, are directed to be given daily. Very soon, the increased flesh on the shoulders begins to diminish, and in two or three weeks, disappears. The shoulder-blades at the same time fall, and reoccupy their natural situations; the health, which had been more or less disturbed, resumes its ordinary state; the mind becomes cheerful and capable of application; the languid, dispirited aspect, which seemed to call for the use of tonics, and stimulants, is dispelled without them. Medical treatment is seldom further required, unless the appetite, and digestion be impaired.

"When the first attack is allowed to run its course undisturbed, the consequences are by no means unimportant, the shoulder-blades remain high and prominent, and no individual with high shoulder-blades, can bear fatigue, or walk with ease. The centre of gravity acquires a new position, and the consequences before hinted at follow. I will repeat them: the form, and the carriage, is neither graceful nor dignified, the agility of the limbs is lessened. Fatigue is soon induced, and the constitution is reported to be weak and feeble; but this latter is an error. The natural constitution is, generally, very good; but the influence of a change in the centre of gravity, on the activity and strength, and the existence of a spinal disease, give the semblance of a bad constitution.

If, after the shoulders have acquired their natural appearance, the carriage is still awkward, let the child be induced to run, and the action of the feet will determine, whether the centre of gravity be in a proper, or a forced position. If the action wants freedom, the person will want strength and symmetry. In such a case, the supporting a weight on the head is highly beneficial; the evil must be overcome. In the second attack, the same means are used as in the first, but not with the same immediate and visible effect. The increased flesh, indeed, disappears, but the right shoulder is more prominent than the left, and the chest is narrow; the system is weak; the limbs are thin; medical aid is requisite. Individuals of a plethoric habit, are benefited by the loss of blood; others, whose digestive organs are impaired, require the ordinary treatment for that malady. When the spinal disease is removed, which is known by the diminution of the flesh on the shoulders, the attention is powerfully called to the figure, which has lost much of what contributed to its beauty and strength. This loss, the efforts of nature are, in general, incompetent to restore. But the assistance afforded the muscles, by the methods already recommended, is of essential importance; and, should the spine have been recently incurvated, and the power of recovering itself when the body is bent, not lost, persisting in these measures may complete a cure.

"In the next step of the disease, when the convex side of each vertebra is lessened from pressure, and that which was almost square has assumed the shape of a wedge, the recovery of the figure is impossible. But, even in this case, the disease may be subdued, the health may be recovered, the further progress of the curvature may be prevented. The benefit indeed is great, but the curve will remain; and the evil, though lessened, will still be an evil." 120.

Our author concludes his work with a short chapter on "anomalous affections of the spine"—a subject that opens a vast field for inquiry and observation, since many diseases that affect the spine, cannot be classed with either the lateral or outward curvatures. Our author's experience is not sufficient to do justice to the subject, yet he cannot pass it over entirely unnoticed.

The first which he notices, is that which affects the muscles of the neck, so as to destroy the influence of the will upon them. The term paralytic is not applicable to the malady. The head rests on one shoulder, or inclines in some other way, altogether uncontrollable by the will. No contiguous muscles partake of the weakness—"nor have those of the neck the deadness of common palsy."

"The affection sometimes commences with a sense of suffocation, or breathlessness, except while in the open air. But in other cases, the loss of muscular power is not preceded by any symptom of bad health; what first gives rise to suspicion is, the head being involuntarily drawn aside, when the attention is excited, as in reading; but which is reco-

vered, on the attention being withdrawn. But the indisposition still remains; and very soon reading becomes unpleasant, from the contraction or weakness of the muscles, and is given up. Still the disease advances; the head inclining more and more, till no power remains in the will to direct the muscles.

"In some cases all the muscles of the neck are affected, in others, only those of one side, which occasions a painful rigidity of the muscles on the opposite side, they being excited to action, while their antagonist muscles are paralyzed; thus drawing the head with considerable force in the line of their motion, occasioning distress from the appearance it produces, and the pain it excites." 132.

This affection is not permanent, for it runs its course in a few years, or a much shorter period, and strength is restored. If any thing has been used towards the close of the complaint, it gains the credit of curing it. The disorder often returns, and again disappears. "It has been immediately followed by insanity—sometimes by death."

Another class of anomalous spinal affections is characterized by one or more years of indisposition—often attributed to debility, or to worms, or to some affection of the brain. The spine is very flexible, and the individual is indisposed to stand erect, so that, when examined, the spine is seldom straight. Change of air, and nutritious diet, are generally prescribed, but with little benefit.

"The sense of debility continues, till a pain of the back sends the individual in a state of great helplessness, to the bed from which, she is not soon to rise. The pain is commonly confined to one, or two vertebræ, though it is not stationary, but attacks the lower vertebræ, then the higher, or removes to the head.

"In some cases the whole of the spine is painful, but not uniformly so; for certain of the vertebræ are alternately more acutely sensible. Independent of the pain, there is a sense of debility, or rather an incapacity of bearing the erect posture without fainting. The countenance, in the midst of this suffering, is not dejected, or sickly." 135.

Some cases are related, in illustration of which we can only afford space for the particulars of one.

Miss M——, aged 16 years, complained, in 1820, of much fatigue after exercise—of impaired appetite, and depressed spirits. These symptoms continued more than a year, when an afflictive event removed her from school. Soon afterward her back became painful, and in a few weeks confined her to bed. The third dorsal vertebra was exquisitely sensible to the touch. In a few days the pain removed to the second lumbar vertebra, which it never entirely left. But a more acute and occasional pain was perceived in some other part of the spine, or in the head. The countenance was not depressed, nor the mind weakened. The bowels were inactive, and the discharges black and offensive. Removal from the bed occasioned fainting. This state continued from the 14th March, 1821, till September of the same year, when she was able to sit in an easy chair for a few minutes. She has, since that time, gradually improved in strength, and is now able to walk some miles. Purgatives and repeated bleedings afforded some relief; but our author apprehends that Nature effected a cure. The parts of the spine that were affected, slightly protruded, and remained so for some time after the pain subsided, but the protrusion has since disappeared.

"This class is characterized by the extreme helplessness of those affected. The erect position can never be borne, except for a short period; while the countenance does not indicate the existence of disease, but has very much of its natural appearance. In most of the cases that I have been made acquainted with, some strong excitement of the mind has preceded the attack. In others, insanity has accompanied it; and, as the Spine never permanently loses it natural form, it may not be unworthy of inquiry, whether the brain and Spinal marrow, be not the seat, both of this, and of the preceding class of diseases." 189.

A third class of these anomalous affections will be illustrated by the following short cases.

"Ann Barnes, aged 7, 1816, had been observed for several months to decline in strength. At first her step was short, and guarded; then she could only walk by taking hold of something for support; at length her lower extremities became useless. I saw her, Feb. 7, when, in addition to an incapacity to move the legs, the whole back was bent, so as to form an arch; and she was wholly unable to hold herself upright. I prescribed two grains of Calomel, to be given every morning. On the 15th, she could move her limbs. 21. The back was less bowed, and the limbs stronger. 28. She could support herself, and by the end of March, her strength and figure were recovered.

"Master M. aged 4, 1820, after being able to walk, lost the power. I saw him Aug. 4. The abdomen was hard and full; the tongue furred. The breath offensive. The Spine formed the segment of a circle, without the child being able, except by lying down, to change that form; and even then, the back was not straight. I prescribed a grain of calomel, followed by a teaspoonful of Magnesia, every morning.

"No perceptible benefit was obtained, till the expiration of the third week, but, after that period, the improvement was uniform, and in three months, the child was well. The medicine was occasionally varied, but the sole object was to correct the state of the bowels." 145.

This affection of the spine, our author considers as evidently sympathetic of the state of the stomach and bowels—and consequently is, in many cases, cured only by a long course of laxative medicines—which if steadily persevered in, have never failed in our author's experience.

"The last variety of Spinal affections that have occurred to me, in sufficient number to form a distinct order, is that change in the figure of the Spine, which is connected with a globular chest. This affection is occasioned by difficult respiration, which in childhood, is commonly attributed to inflammation, and means that debilitate are used as a cure; often with present success. But the disease returns in a few months, and is more obstinate. Again, it is temporally removed, and the child acquires the character of being highly inflammatory.

"The disease however, is in the digestive organs, and is more effectually subdued, by increasing their strength. After repeated fits of laborious breathing, the chest acquires a globular form, from the action of the muscles, to which the Spine corresponds." 147.

We have now presented our readers with a full account of the little work before us. It is evidently the result of considerable observation and reflection; and although it is defective in the scientific anatomical and physiological details by which Mr. Shaw's work is characterized, yet it is very useful in its way. On such an abstruse and little cultivated subject we want labourers of various and different kinds. We want close and attentive observers of external phenomena—good anatomists—ingenious mechanists—and even dexterous shampooers. None of these are to be relied on exclusively—none of them are to be rejected contemptuously by the prudent eclectic practitioner.

IV.

Medical Jurisprudence. By Dr. Paris and Mr. Fonblanque.

TOXICOLOGY.

In our 15th Number we concluded our second analytical article, with some observations on medical evidence, in cases of poisoning, reserving for the present paper a more particular detail of the classification, and of the history of individual poisons. Toxicology, we conceive, is one of the most important and difficult subjects of medical jurisprudence, and we acknowledge, with pleasure, our conviction that there are few people, in this country, more capable of doing justice to the difficult task than Dr. Paris. His tried abilities as a chymist and pharmacologist, eminently qualify him for this undertaking, and we cheerfully bear testimony to the able manner in which he has discharged his duty, considering the narrow limits within which he was confined.

If we define poisons to be certain substances which, when taken in a certain quantity, destroy life, it will be very difficult to say where poisons end, and food or medicine begins. That the scale of poisons runs pretty low, may be inferred from a paper in the Associated Apothecaries' Transactions, where we have instances of poisoning by an orange, by pickled pork, and by a mutton chop. We think, however, that this is carrying the thing too far—and that the term poison should be limited to those active and deleterious substances which, *in small quantities*, destroy life, whether taken by mistake or administered by design. We know indeed that it would be difficult to make this definition apply in all cases—but it is better to have some definition to restrain us than the wild and unbridled latitude assumed in the paper above alluded to.

The classification of poisonous substances has been a matter of much difficulty and speculation, according to the botanical, chemical, or pathological views of authors. It is perhaps impossible to meet or combine all these views in any one system of arrangement, but Dr. Paris (for we need hardly include Mr. Fonblanque's name in this department) has endeavoured to select one which may approach the nearest to the imaginary fabric of perfection, viz. that proposed first by Foderée and adopted Orfila, having pathology for its basis, but yet distributing the different poisons (with some few exceptions) in an order corresponding with that of their natural history. Dr. Paris, therefore, gives the following sketch of an arrangement originally proposed in the 5th edition of his Pharmacologia.

"A CLASSIFICATION OF THE DIFFERENT MODES BY WHICH POISONS PRODUCE THEIR EFFECTS.

1. BY ACTING THROUGH THE MEDIUM OF THE NERVES WITHOUT BEING ABSORBED, AND WITHOUT EXCITING ANY LOCAL INFLAMMATION.

a *By which the functions of the nervous system are destroyed.*

Acrid.	Aconite. Jatropa Curcas.
Narcotico-Acrid.	Alcohol. Oil of Tobacco.
Narcotic.	Essential Oil of Almonds.† Camphor.† Opium.† ?

b. *By rendering the heart insensible to the stimulus of the blood.*

Infusion of Tobacco.
Upas Antiar.

" † This mark denotes that the substance, against which it is placed, may also act by being absorbed."

II. BY ENTERING THE CIRCULATION, AND ACTING THROUGH THAT MEDIUM WITH DIFFERENT DEGREES OF FORCE, ON THE HEART, BRAIN, AND ALIMENTARY CANAL.

Corrosive.
- Arsenic.
- Emetic Tartar.
- Muriate of Baryta.

Acrid.
- Hellebore.
- Savine.
- Meadow Saffron.
- Squill.

Narcotic.
- Opium. ‡
- Lettuce.
- Henbane.
- Prussic acid.

Narcotico Acrid.
- Deadly Nightshade.‡
- Hemlock.
- Camphor.‡
- Cocculus Indicus.

III. BY A LOCAL ACTION ON THE MUCUS MEMBRANE OF THE STOMACH, EXCITING A HIGH DEGREE OF INFLAMMATION.

- Corrosive Sublimate.†
- Verdegris.
- Muriate and Oxide of Tin.
- Sulphate of Zinc.
- Nitrate of Silver.
- Acids.
- Alkalies.
- Cantharides.†

Acrid.
- Bryony.
- Elaterium.†
- Colocynth.†
- Camboge.
- Euphorbium.
- Hedge Hyssop.
- Croton Tiglium.
- Ranunculi." 207.

The first class comprehends such poisons as operate, through the medium of the nerves, upon the organs directly subservient to life—and therefore it is not absolutely necessary that they should be introduced into the stomach, being capable of exerting their deleterious influence by application to any part duly supplied with nerves. The second class acts, or is supposed to act, only through the medium of the circulation. We can scarcely think that the action of prussic acid and alcohol, or essential oil of almonds, is so different as to entitle them to different classes. Surely a dose of prussic acid that destroys life in a few seconds must act more through the medium of the nerves than the blood-vessels; and yet it is placed among the substances whose action is through the latter channel. Again, as arsenic, emetic tartar, hellebore, squill, &c. must have a powerful local action on the delicate structures of the stomach, it seems unnatural to separate them from mercurials, cantharides, &c. Hippolitus Cloquet, a recent French writer on toxicology, (43d vol. Dict. des Sciences Med.) places both the second and third classes of Dr. Paris, under the head of "irritant, corrosive, or escharotic poisons."

The mineral poisons, being the substances generally employed

"‡ Signifies that the article has also a local action."

as the instruments of crime, are first treated of by Dr. Paris, by examining their external characters; 2d, their chemical composition; 3d, their tests; 4th, the symptoms; 5th, physiological action; 6th, forms of application; 7th, lesions of structure produced; 8th, phenomena post mortem.

1. *Arsenic*. This substance combines with two proportions of oxygen, forming arsenious and arsenic acids—the former, or white oxide, as it is called, is the most fatal of all the mineral poisons, and the most frequently employed by the assassin and suicide. Dr. Paris denies the alliaceous or garlic smell commonly attributed to the vapour of arsenic, affirming that when such smell is emitted the oxide is reduced to its *metallic* state. Dr. Paris does not follow his own plan in the consideration of arsenic. The *tests*, instead of coming in under the 3d head, are not treated of till the last. This, however, is of very little consequence.

Symptomatology. Dr. Paris divides the symptoms of poisoning by arsenic into three classes, or degrees of intensity—1st, where the lesion, though dangerous, is not fatal—2d, where death does not take place till after 24 hours—3d, where the poison proves fatal within the above space of time. The symptoms indicative of the *first* degree of intensity are, uneasiness of the præcordia, cholic, soreness of the gums, itching of the surface, headach, strangury, &c. Occasionally vomiting is produced with dryness and heat of the fauces. Though life be spared under such circumstances a train of consecutive symptoms may harrass the patient for a long period. In the *second* degree of intensity, where the patient lives two, three, or more days, the earliest symptoms are heat, thirst, vomiting, inexpressible anxiety, purging or tenesmus, wandering pains, quick feeble pulse, headach, abdominal distention, and, towards the close of the scene, sleeplessness or convulsions, and sudden death at last. In the *third* degree, we have austere taste, heat and constriction of the pharynx and œsophagus, excruciating pains in the stomach and bowels, with vomiting of brownish or other dicoloured matters, not unfrequently mixed with blood, inexpressible anxiety about the præcordia, faintings, dark and fetid evacuations from the bowels, unquenchable thirst, palpitations, cramps, strangury, laborious respiration, cold sweats, hiccup, occasionally convulsions, but rarely delirium, death. These symptoms will not all be found or rarely in the same person, and therefore the absence of several of them is no proof that arsenic has not been administered.

Modes of Poisoning. Life may be destroyed by the internal administration of arsenious acid, or by its external application to abraded surfaces, the symptoms being analogous in both cases—but often more rapid in the latter than in the former mode. Mr. Brodie tried many experiments on animals, taking care that they should not be able to lick the wounds where the arsenic was applied, and the results were uniform. The stomach was, in every case, not only more violently inflamed than when the poison had been internally administered, but this inflammation preceded any inflammatory appearance in the wound.

Physiological Action. In the Philosophical Transctions for 1811, Mr. Brodie has shown, by experiments, that the deleterious influence of arsenious acid arises from it being absorbed—and consequently that it must be regarded as a vital rather than a chemical agent. In most of these experiments death took place too soon to be the consequence of local inflammation of the stomach—where indeed the marks of phlogosis were sometimes scarcely visible—excepting as the effects of the poison in the general circulation. It sometimes happens, however, that death will ensue from the local action of arsenic in the stomach, the animal having survived the effects produced on the organs more immediately subservient to life, as the brain and heart. This may be termed "*consecutive poisoning.*"

Organic Lesions, post mortem. These are not uniform. The stomach will generally be found more or less inflamed, with patches and streaks of different colours—the villous coat softened—ulceration only in protracted cases—the appearance of sloughs fallacious, as they are usually only layers of effused blood—thickenings of the coats in some instances. The duodenum generally exhibits analogous lesions, and the whole line of the alimentary canal will be found more or less affected, according to the quantity of arsenic that has been administered and other circumstances. It is curious that the rectum appears sometimes to suffer more than any higher tract of intestine. Mr. Brodie never found the pharynx or œsophagus inflamed, but many others have given different testimony. The parts of generation, in both sexes, have not very unfrequently been found gangrened or swelled. Brodie, Ruysch, Jaegar, agree that the blood is not coagulated in the vessels, where death has been produced by arsenic. Our author properly cautions the anatomist not to confound the red or violet colour of inflammation with that which is occasionally found to arise from the ingestion of certain coloured drinks. Infusion of the red poppy has done this—tincture of cardamoms will also produce the same effect.

5. *Detection of Arsenious Acid.* This section being merely an amplification of what Dr. Paris has published in his Pharmacologia, we need not—indeed we could not give a satisfactory analysis of it here. The work alluded to is now so universally diffused, that his sentiments are well known. Dr. Paris is of opinion that the reproduction of the metal is not necessary as an unequivocal proof of the presence of arsenious acid. He thinks the silver and copper tests, described in both his works, are capable, under proper management and precaution, of furnishing striking and infallible indications—even more satisfactory in their results than the metallic reproduction. In order to preserve some continuity in the chain of our analysis, we shall give the two tests above mentioned, as they occupy but a very small space.

" *Fused Nitrate of Silver, or Lunar Caustic.* For this test we are indebted to Mr. *Hume*, who first suggested its application in the Philosophical Magazine for May, 1809, (vol. xxxiii.) His method of using it is as follows : into a clean Florence flask introduce two or three grains of the suspected substance, in the state of powder, to which add about eight ounces of rain or distilled water, and heat the solution until it begins to boil ; then while it boils frequently shake the flask, and add to the hot solution a grain or two of sub-carbonate of potass, agitating the whole to make the mixture uniform. Pour into a wine glass about two table spoonsful of the solution, and touch the surface of the fluid with a stick of lunar caustic. If arsenic be present, a beautiful yellow precipitate will instantly proceed from the point of contact, and settle towards the bottom of the glass as a flocculent and copious precipitate. By this test the 60th part of a grain may be satisfactorily recognised in two ounces of water. The presence of some alkali is essential to the success of the experiment, since arsenious acid is incapable, by the operation of simple affinity, to decompose the *nitrate of silver*."* 240.

Objections to the above have been made, and they have been

" * If any trifling opacity occur in a simple solution of arsenic, when assayed by the nitrate of silver, it may be considered as the effects of some casual impurity ; this may be farther demonstrated by bringing over the surface of the arsenical liquid, a piece of blotting paper, or a stopper moistened with a solution of ammonia, when there will instantly form a copious yellow precipitate of arsenite of silver. If this experiment be performed by spreading the mixed solutions of arsenious acid and nitrate of silver over a surface of glass, laid upon white paper, the result will be most striking and beautiful, for, on slowly bringing the ammoniacal test over it, the yellow cloud will gradually diffuse itself over the surface."

answered by Dr. Paris. The modification of the experiment which he recommends is, to drop the suspected liquor on a piece of white paper, making with it a broad line—along which line a stick of lunar caustic is to be slowly drawn several times successively, when a streak is produced, of a colour resembling that of Indian yellow. This is equally produced by the presence of arsenic and that of an alkaline phosphate—but the one from the *former* is rough, curdy, and flocculent, as if affected by a crayon—that from the *latter*, is homogeneous and uniform, resembling a water-colour laid smoothly on with a brush. A still more important distinction soon succeeds. In less than two minutes, the phosphoric yellow fades into a *sad green*, and becomes gradually darker—ultimately, quite black: while the arsenical yellow, on the contrary, remains permanent, or nearly so, ultimately turning brown. The sunshine must be avoided in this experiment.

"*Sulphate of Copper*. This test of arsenic is the one discovered by *Scheele;* when added to the *arsenite of potass* a beautiful green precipitate (constituting a pigment known by the name of *Scheele's green*) is produced; 'so decidedly,' says *Dr. Bostock*, 'does this phenomenon indicate the presence of arsenic, that I thought it desirable to ascertain, as exactly as possible, what were the best proportions in which the ingredients should be employed, and in what way they should be mixed, so as to exhibit the effect in the most obvious manner. After a number of trials, in which the substances were employed in various quantities, and under different circumstances, I am disposed to recommend that the proportions of the *arsenic*, the *potass*, and the *sulphate of copper*, should be to each other as the numbers *one*, *three*, and *five*, respectively; for instance, if one grain of arsenic and three grains of potass, be dissolved in two drachms of water; and, in another equal quantity of water, five grains of sulphate be dissolved, we have two solutions, which are transparent, and nearly colourless; but upon mixing them together, the whole is converted into the most beautiful grass-green, from which a copious precipitate of the same hue slowly subsides, leaving the supernatant fluid nearly without colour. If the same materials are employed in the same manner, but without the arsenic, a delicate *sky-blue* is formed, which is so decidedly different from the former colour as not to admit of the possibility of error.' In this experiment then, as well as in that with the nitrate of silver, it is necessary that the arsenious acid should be combined with an alkaline base; and for the same reason, in order to bring the double elective attractions into play; *Mr. Hume* has accordingly availed himself of the property of ammonia, to form an *ammoniuret of copper*, which is to be made according to the formula already given for the preparation of the silver test." 246.

For answers to the objections that have been made to this test we must refer the reader to Dr. Paris's works.

The detection of arsenic amidst a complicated mass of alimentary matter has long been considered a process of great trouble; and various proposals have been made to obviate the difficulties. Dr. Paris recommends the juridical chemist, who suspects arsenic in broth, coffee, or any coloured liquid, to add a solution of *ammoniuret of silver*, and, thus, to precipitate indiscriminately all the bodies which it may be capable of so affecting. The precipitate may then be collected, and submitted to heat in a glass tube, as before directed.

Considering the difficulties and fallacies in the way of detecting minute portions of arsenic in the human body, it evidently requires an experienced and practical chemist for conducting the process. In the hands of such a person, we should suppose the foregoing tests would be sufficient—for we imagine, that a jury of this country will very rarely place the die of a man's fate on the result *alone* of a complicated chemical process for testing the presence of arsenic. There must be very strong evidence of a moral nature to aid such proofs of criminality before a jury would pass the verdict of guilty.

The means of obviating the poison of arsenic does not properly, we suppose, fall within the range of forensic medicine, as Dr. Paris does not allude to them, though he gives the antidotes, or modes of treatment, in most of the other poisons. In his Pharmacologia, however, Dr. Paris has given sensible and interesting instructions on this point. The ejection from the stomach of the arsenical poison is the *sine qua non*, since we know of no substitute capable of decomposing or rendering inert this deleterious agent. Lime, or its carbonate, indeed, renders arsenic less soluble; but this is a thing which no man would trust to. Hitherto emetics have been the general resource, especially the sulphates of zinc and copper; but the mechanical evacuation of the stomach by means of an elastic tube, must, we think, supersede all other means in a very short time. We conceive that it is a culpable neglect for any practitioner to be without the proper apparatus for this purpose. Lime-water, if at hand, might be injected into the stomach, as the menstruum for washing out the poison of arsenic; but this being out of the way, water alone should be immediately had recourse to for the said operation. This instrumental antidote is the only safe one—

> ———— quo non præsentius ullum
> Auxilium venit, ac membris agit atra venena.—

When the poison has been mechanically ejected, we may then administer such remedies as promise to counteract the effects on the constitution produced by the stay of the poison in contact with the stomach.

2. *Oxymurias Hydrargyri.*—The effects of this poson will vary according as it is taken in large quantities with the view of destroying life at once, or in repeated doses so as to act as an "accumulative poison." In the former case, we have the general symptoms produced by arsenic. In the latter, salivation and its various effects. It is asserted, however, and by Dr. Paris's personal experience confirmed, that when sublimate is taken for a long time in small doses, it will induce a train of formidable symptoms, together with hectic fever—without salivation. In respect to the wonderful stories which have been related of salivation resuscitated after it had, for many months or years, ceased, and in that state, continued for years, we give no credence to them. Neither the authors that relate, nor those who quote them, take any notice of salivation without mercury, though Cullen and other nosologists have enumerated nearly thirty species of idiopathic or symptomatic ptyalism independently of mercury. We are really astonished, that Dr. Smith and Dr. Paris should have quoted the case of Dr. Hamilton (see vol. I. of Analytical Series, page 45) where, after a few doses of blue pill, taken *four years* previously, a salivation (mercurial) came on and lasted more than a year! Several medical Gentlemen of this metropolis have seen a lady (Mrs. Price, the relict of a surgeon in the city, and who now resides at Brighton) who for years had a copious non-mercurial ptyalism of a most distressing nature. We believe she still has it; but at all events, Dr. Armstrong and others saw her as well as ourselvs, under the care of a respectable and able surgeon at Hackney—Mr. Illingworth. We lately saw another remarkable instance of this spontaneous ptyalism in a lady, attended with inordinate secretion from the whole mucous membrane of the bowels, which lasted about six years and ultimately wore her out.* If mercury committed such vagaries as these, we wonder Mr. Abernethy and others have not published some cases of the kind.

Physiological Action. It acts corrosively on the stomach, and sympathetically through that organ on the heart and brain, suspending their functions and producing death. When slowly administered; the case, of course, is otherwise; as it is then absorbed into the system, and acts gradually on various structures and functions of the body.

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* See also a case of spontaneous ptyalism related by Dr. Carter in the December Number of the London Medical Repository.

Antidotes and Treatment. Plentiful dilution is the first object, and evacuation the next. This, as in the case of arsenic, should be done mechanically, as far more certain than by emetics. Whites of eggs or the gluten of flower decompose sublimate, if they are taken in large quantities—but we would infinitely prefer the mechanical evacuation.

The organic lesions discoverable after death cannot be discriminated from those produced by other corrosive poisons.

Detection Chemically. Dr. Paris has entered rather more fully into the testing of sublimate in this work than in his Pharmacologia, vol. II. page 241. After giving the tests from the last-mentioned work, by metallization through the agency of galvanism, as recommended by Mr. Sylvester, our author goes on to state the other tests by carbonate of potash, ammonia, and lime water, succinctly given in the Pharmacologia, but here amplified, without much additional information. In forensic cases we generally have the sublimate dissolved in various coloured liquids which are liable to obscure the characteristic indications which the several reagents would otherwise occasion. In these instances Orfila recommends the previous addition of chlorine in order to discharge the colour; but many and weighty objections are made by Dr. Paris.

> "It will be preferable on these occasions to precipitate the salt by an appropriate reagent, and then to assay the precipitate for metallic mercury; or to evaporate the solution, and to submit the matter so obtained to the process of sublimation, when the sublimate may be dissolved in distilled water, and examined by the tests above described. This circuitous process may, however, in many cases be rendered unnecessary, by dropping the solution on the surface of white paper, and in such a situation proceeding to its examination by tests; when the colour of the precipitate will rarely be exposed to any optical fallacy. The Galvanic process of metallic reduction will also furnish a satisfactory solution of the problem." 273.

Sublimate is very easily decomposed in the stomach by various alimentary matters, and there converted into calomel. In these cases we must seek to establish the fact, of poisoning through the detection of metallic mercury by the process of calcination and sublimation.

3. *Antimony—Tartarized.* Speaking generally, emetic substances dislodge themselves, and thus prevent fatal effects. But this

is not always the case. There are states of the system where the sensibility of the stomach (as in apoplexy, coma, &c.) is so much diminished that emetic tartar may be given in large quantities without vomiting—and here we may apprehend bad effects in the stomach, a case of which was communicated by M. Cloquet to Orfila. The symptoms produced by this salt resemble those of most other corrosive poisons, and have been described by various writers—the principal are nausea—copious vomiting—hiccup—cardialgia—pains in the stomach—colic—copious stools—syncope—convulsion, &c. death.

Antidotes. The great object is the discharge of the poison by vomiting or rather by mechanical means. Strong tea, as being the nearest at hand, may be employed as the menstruum for emesis or for washing out the stomach; but no dependence should be placed on the decomposing powers of this or any other vegetable substance. Evacuations is the only sure process.

The other mineral poisons are discussed with minuteness and ability in the work before us; but we cannot follow the author through the details. We shall take some notice of another class in Dr. Paris's arrangement.

IV. *Vegetable Poisons.* These are not so important in a forensic as in a medical point of view. With the exception of opium and a few others, they must be considered as objects of accidental rather than of criminal poisoning. Even opium is far more frequently employed by the suicide than the assassin.

1. *Opium.* The primary action of this celebrated drug, when taken in considerable doses, is considered by Dr. Paris as powerfully and diffusibly stimulant; but this excitement is so very transitory as not to be apparent—the powers of life being immediately depressed, and succeeded by stupor, delirium, stertor, cold sweats, convulsions and apoplectic death.—The quantity necessary to produce these effects is purely relative—in one person it may destroy life in the quantity of a few grains—while the Turk, and opium-eater in general may take as many drachms, without inconvenience. This temporary immunity is, as may naturally be supposed, followed by proportionate suffering. Nature will not be cozened by the greatest ingenuity of man. We may borrow from her, but like a ursurer she sooner or later extorts a fearful interest, and with inexorable punctuality.

The symptoms of a poisonous dose of opium are well known, and can hardly be mistaken by the youngest tyro. Insensibility, slow or stertorous breathing, livid or cadaverous countenance, cold skin, insensibility of pupils, almost imperceptible pulse—death, in from six to twenty-four hours.

Physiological Action. We agree with our author that opium produces death by destroying the functions of the brain, and through that the power of respiration, in consequence of which suffocation ensues. But the question is still undecided, how this destruction of the sensorial energies is affected? Dr. Paris inclines to the opinion that it is by absorption, though he does not doubt that opium may occasionally produce an effect upon the sentient extremities of the nerves of the stomach, and thus affect the brain sympathetically.

Treatment. The first object is the evacuation of the stomach. Here, of course, the mechanical evacuation will be more certain and expeditions than all others. If this be declined, then 15 or 20 grains of sulphate of zinc should be given; or from 5 to 10 grains of sulphate ofcopper dissolved in water, the vomiting to be kept up by irritation of the fauees. The affusion of cold water, by awakening the sensibility of the brain and nervous system is said to act in promoting the power of emetics. It is not, of course, till after the evacuation of opium that acids are to be given. Blood-letting, to empty the vessels of the brain, is recommended on the authority of Orfila; but as Dr. Paris ranks opium among the poisons that are absorbed from the stomach, venesection, as a powerful promoter of absorption, cannot consistently with that theory be prescribed.

Organic Lesions Post Mortem. Orfila asserts that no alteration can be discovered in the alimentary canal of those who have taken opium or any narcotic poison. Others, however, have observed congestions of blood in the internal organs.

Detection. The odour will discover the nature of the poison. The chemist may also proceed to obtain morphia from the solution.

2. *Hydrocyanic Acid.* The history and qualities of this powerful substance are sufficiently known to the public. As for antidotes there are none. The effects of the acid on the vital powers may, in some degree, be counteracted by diffusible stimuli, as brandy, ammonia, æther, camphor, &c.

3. *Belladonna.* The beautiful and tempting berries of this plant have, in numerous instances, proved fatal to children and ignorant persons in this country.

The symptoms are, extreme dryness of the mouth, fauces, and throat—difficult deglutition—dilatation of the pupil—nausea—symptoms of intoxication, with fits of laughter, ravings, violent gestures, continued motions of the hands and fingers. To these succeed redness and tumefaction of the face, feeble pulse, paralysis of the intestines, livid spots on the surface, cold sweats, convulsions—death.

Physiological Action. According to Orfila, this poison is absorbed into the system, and acts on the brain and nerves. At the same time it exerts a local action on the stomach—though less violent than that occasioned by the acrid poisons. That it acts sometimes purely through the medium of the nerves may be inferred from the dilatation of the pupil, by the mere application of belladonna to the eyebrow.

We must pass very rapidly over the remaining articles of the vegetable poisons, as we find but little that can lay claim to novelty.

4. *Tobacco.* Orfila supposes that the active parts of this celebrated plant are absorbed into the circulation, while the experiments of Mr. Brodie tend to prove that they operate through the medium of the nerves. It is very singular that, in Mr. B.'s experiments, the essential oil of tobacco was found to act very differently from the infusion—for while the *former* appeared to act exclusively on the brain, leaving the powers of the circulation unimpaired, the *latter* acted on the heart at once, suspending its action even before the animal ceased to respire, thus destroying life by syncope.

5. *Conium.* This appears to act by absorption; at the same time it exerts a local irritation, with inflammation more or less violent. After evacution, the cerebral excitement is reduced by bleeding. The best antidote is vinegar.

6. *Nux Vomica.* The peculiar proximate principle of this substance, known by the name of *strychnia* or strychnine, is a highly alkaline salt, unsupportably bitter, and next to prussic acid, the most virulent poison known. It is supposed to exert a specific action on the spinal marrow, producing tetanus, immobility of the thorax, &c. Hence its application to paralysis, which may be considered as the reverse state of tetanus.

7. *Cocculus Indicus.* Dr. Goupil has communicated certain curious facts relating to this substance, which tend to throw

some light on the poison of fishes. This substance is not only destructive to fishes, but to different carnivorous animals, and probably to man. The poisonous principle passes apparently unchanged through the organs of digestion into the absorbent system of the fishes, the flesh of the latter becoming poison to other animals.

8. *Alcohol.* This is a slow or a sudden poison. It is to its effects in the former way, that the physician must look with most anxiety. The effects of alcohol vary much according to the state of combination in which it is taken. Thus, Mr. Brande has shown that port, madeira, and sherry, contain from one-fourth to one-fifth their bulk of alcohol. A man, therefore, who drinks a bottle of port daily, will take nearly half a pint of pure alcohol, which is equivalent to a pint of brandy! Were he to take the latter alone or mixed with water, the effects would be very different.

"The remote consequences too of alcohol in these different states, are as striking and distinct as their immediate effects. It is well known that diseases of the liver are most common, and the most formidable of those produced by the use of *ardent* spirits; it is equally certain that no such disorders follow the intemperate use of wine that is perfectly *pure;* let it be remembered that the greater proportion of that which is drunk in this country contains uncombined brandy, purposely added to meet the demand of the British market; and *Dr. Mac Culloch* thinks that it is to the unwitting and concealed consumption of this uncombined spirit, that we ought to attribute the prevalence of those hepatic affections which are comparatively little known to our continental neighbours. But although wine, in a state of purity, may be thus fairly excluded from the general obloquy which attaches to spirituous potations, it must not be regarded as entirely free from imputation. 'The effects of wine,' says *Rush*, 'like those of tyranny in a well-formed government, are first felt in the extremities; while spirits, like a bold invader, seize at once upon the vitals of the constitution.' And even with respect to ardent spirits, although they can only be regarded as diluted alcohol, still each species appears to possess a peculiarity of operation; owing, no doubt, to the modifying influence of the other elements of the liquid; thus *brandy** is said to be cordial and stomachic; *rum* more heating and sudorific; *gin* and *whiskey*, diuretic; and *arrack*, styptic, heating, and narcotic. It seems also that a modified effect is produced by the addition of various other substances, such as sugar and acids; which latter bodies, besides their anti-narcotic powers, appear to act by favouring a more perfect combination and mutual penetration of the particles of spirit and water. The effects also which are produced by the habitual use of fermented liquors differ essentially according to the kind that is drunk; thus, ale and porter, in consequence of the nutritive matter, and perhaps the invigorating bitter with which they are charged, and the comparatively small proportion of alcohol which they contain, dispose to plethora, which is sometimes terminated by apoplexy." 436.

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* "I apprehend that the peculiar flavour of *cogniac* depends upon the presence of an ætherial spirit, formed by the action of tartaric, or perhaps acetic acid upon alcohol. It is on this account that nitric æther, when added to malt spirits, gives them the flavour of brandy." *Pharmacologia, vol.* 2, *p.* 396.

Alcohol in large and poisonous doses appears to destroy the functions of the brain, without occasioning that previous stage of excitement induced by smaller doses—whence coma and insensibility are the immediate consequences, and the patient dies apoplectic for want of respiratory functions. Mr. Brodie was the first to propose artificial breathing in such cases; and in an experiment carefully performed on an animal under such circumstances he preserved its life. In most cases, however, the life of man (the only animal addicted to dram-drinking) is destroyed by accidents or contingencies, as exposure to cold, or suffocation from an imperfect act of vomiting, during which a portion of the contents of the stomach are forced into the trachea.

The action of alcohol on the brain is supposed by Mr. Brodie and our author to be sympathetic through the medium of the nerves.

The treatment is by emetics, bleeding, cold lotions to the head —easy position of the body, and a mild atmosphere.

The two remaining short sections on animal and aerial poisons contain nothing that we deem it necessary to lay before our readers. We have now finished the second volume of the work before us. About a fourth of the third or last volume, (not filled with acts of parliament, charters, trials, &c.) is on sudden and mysterious deaths, and infanticide. This portion will furnish us with matter for a fourth and last analytical paper.

V

1. *Illustrations on the Medical Properties of Quinina.* By John Elliotson, M.D. Fellow of the Royal College of Physicians, and Physician to St. Thomas's Hospital.

[Med. Chir. Trans. Vol. XII.]

2. *On the Febrifuge Power of the Sulphate of Quinine.* By D. J. H. Dickson, M.D. Physician to the Royal Naval Hospital, Plymouth.

[Ed. Med. Journal, Oct. 1823.]

3. *Sur l'Emploi du Sulfate de Quinine à Haute Dose dans des Cas de Fièvres Intermittentes, observées in Italie.* Par L. Martinet, M. D.

[Revue Medicale.]

Of all the energetic substances which chemical ingenuity has lately extracted from different articles of the materia medica, those from cinchona appear to us most likely to be permanently and highly useful. We have already seen such powerful and salutary effects from the substance at the head of this paper, that we cannot help anticipating from it the most beneficial results to therapeutical medicine.

Dr. Elliotson, a most able and zealous cultivator of his profession, was among the first in this country to draw the attention of the faculty to the remedy under review, in a paper read at the Medico-Chirurgical Society, on the 8th July 1823, and since published in the last volume of their Transactions. Since that period, several papers have appeared in periodical journals, containing detached cases of the exhibition of the medicine of which we occasionally took notice in our Periscope.

M. Pelletier, about four years ago, furnished M. Magendie with specimens of the cinchonine alcalies, and this ingenious experimentalist soon proved them to be innocent, and applicable to remedial purposes. M. Chomel, at La Charité, was among the first to exhibit the sulphate of quinine in cases of intermittent fever, and with success. This practice has been now extensively followed on the Continent, and although some injurious effects have followed large doses of the medicine, its good character daily and hourly improves. But it is not to agues alone that its administration may be confined. In all the periodical complaints for which bark and arsenic have been formerly prescribed, the sulphate of quinine will prove a valuable substitute in as small a form as can well be wished. In various anomalous and cachectic diseases, we have reason to hope much from this powerful tonic.

Among the first cases in which Dr. Elliotson prescribed this remedy, was one of typhus fever, brought to St. Thomas's Hospital. The patient was a poor half-starved Irish woman. She was supported by beef-tea and milk—the epigastrium, forehead, and occiput, were blistered, and hydrargyrus cum creta was administered in doses of one to two scruples every six hours, till the mouth became sore. The delirium and stupor were entirely subdued—the tongue became clean and moist—but debility increased hourly. The face became ghastly, and the body sunk lower in the bed. Dr. E. ordered three, and soon, five grains of the sulphate of quinina every six hours, the diet to continue the same. "A striking amendment was observed the next day, and she speedily recovered." When about to be discharged, she suddenly relapsed into great prostration of strength, but the quinina again restored her to strength. Dr. Elliotson observes that, although in doses of five grains every six hours, he never observed any bad effects from the sulphate, yet a dose of ten grains occasioned vomiting in the only three instances where he ventured on such a quantity. Dr. E. next relates three cases of intermittent fever, treated at St. Thomas's Hospital with the sulphate of quinina. The first was a quartan, of long standing. He was ordered five grains of the sulphate every six hours. The first paroxysm was mitigated, and no more returned. The second case was a tertian, of short duration. Only one paroxysm occurred after the commencement of the sulphate. The third case proved more refractory; but the disease felt the influence of the medicine almost immediately, and was removed in little more than a fortnight.

Conceiving that the virtue of the medicine must necessarily reside in the quinina itself, which, though impure, might be procured at a much less expense than the sulphate; Dr. Elliotson had some prepared in the following manner.

> "The article was prepared for my use, by digesting cinchona in a very dilute solution of sulphuric acid (℥ij to four gallons of water) straining, and then adding magnesia to saturation, by which means the quinina was precipitated from the acid, mixed with tannin and extractive matter, and sulphate of magnesia remained in solution. The precipitate was again dissolved in sulphuric acid, again precipitated, and finally washed and dried. A pound of cinchona cordifolia furnishes about an ounce of this impure quinina, or about two drams of pure sulphate of quinina by another process, in which the quinina is obtained pure, by means of alcohol previously to its formation into a sulphate, whence the greater real expense of this article."—*Med. Chir. Trans.* Vol. xii. part ii. p. 554.

Although some of the cases treated with the quininia alone, are less decisive than others, yet, as far as they go, they all show the power of the medicine, without exception. That failures will occur with any remedy, is but too certain, for, as Dr. E. justly observes, "no remedy is so specific but that the previous removal or diminution of some morbid, or at least, unfavourable condition, may be requisite to its success." Eleven cases of intermittent fever treated with the quinina are related by Dr. Elliotson, and all of them were cured in a moderate, some in a very short time. The dose was generally, we might say always, five grains every six hours. "My general experience," says D. E. "of simple quinina, as a tonic, is the same as of the sulphate; but I have never observed derangement of the stomach induced by doses of the impure preparation, I employed, so large as ten grains, every six hours." He begs, however, not to be understood as recommending simple quinina, in preference to the sulphate. His object is merely to illustrate the virtues of the substance, whether simple or combined. Several of Dr. E.'s friends have employed the sulphate with success. It succeeded in cases where the bark had previously failed. We shall adduce the following case, furnished by Dr. Roots.

"M. Sullivan was admitted into St. Pancras Infirmary, on May 7th, and had been suffering under tertian for nearly a month. She took the liquor arsenicalis from the 8th of May to the 23d, and every two or three days, rhubarb and calomel, without any advantage. From the 23d of May to June 6th, she took cinchona in dram doses every six hours, with the decoction and tincture, continuing at times the rhubarb and calomel. As the paroxysms still returned at the regular period, the cinchona was discontinued, and the liquor arsenicalis resumed in doses of ♏ ix. every six hours, which she took from the 6th of June till the 20th. On the 20th, finding the paroxysms still return at the usual period, I ordered her five grains of the sulphate of quinina, in pill, to be given every six hours.

"She took twelve doses, never having any return of the paroxysm after the first dose, and was discharged on the 2d of July.

"'It is right to mention, that the day prior to the sulphate of quinina being ordered, she was allowed a pint of porter daily.'

"Dr. Roots, I may add, has employed the medicine but once besides, and says, in his letter to me, 'In another case of quartan, the sulphate was given in doses of two grains every six hours, and was equally successful.'" 560.

Dr. Elliotson has never observed any bad effects from the sulphate or simple quinina—except what has been stated, viz. sickness of stomach, when the dose was augmented to ten grains. He properly observes that—"quantities that can disagree are not required." Five grains of the sulphate every six hours, he thinks, is the largest dose that can be necessary. We have not found it necessary to give more than twelve or fourteen grains in the twenty-four hours to adults. The medicine, in all cases, should be continued one or two weeks after the symptoms have ceased.

It is true, as Dr. Elliotson remarks, that these are not *new* remedies, since we have been prescribing them ever since bark came from South America. But they are new forms—they are, in short, *the remedy* freed from a huge envelope of inert and disgusting matter.* Every body knows how we were obliged to "*throw in*" the bark in intermittent and remittent fevers—not seldom with the effect of overloading the stomach, and causing it all to be *thrown out* again. The astonishing power of a few grains of these active principles over the orgasms of fever, may be compared (as Dr. E. has aptly done) to the effect of throwing a little dust upon bees engaged in battle, as described in the Georgics of Virgil.

——————Hæc certamina tanta,
Pulveris exigui jactu, compresse quiescunt.

Dr. Dickson (then of Clifton) has given his testimony in favour of the febrifuge qualities of the sulphate of quinine. He first tried it in the case of one of his own children, five years of age, who had been ill for more than a month, and was much reduced by repeated attacks of fever, which at first assumed the character of the infantile remittent, apparently depending on disordered state of the bowels, which were very torpid. After this state of the alimentary canal had been corrected the fever continued to recur—at first in a tertian, but latterly in a quotidian form, with morning paroxysms which lasted till after noon, having the cold, hot, and sweating stages distinctly marked. She took, in the whole, fourteen grains of the sulphate of quinine, in doses of one grain twice a day. She had no return of the paroxyms.

The second case was a patient of Mr. Henderson's, a girl upwards of seven years of age, who had been attacked ten days before with a quotidian intermittent strongly marked. She was cured by six grains of the sulphate of quinine. Some other cases are related, in which the medicine evinced similar effects.

Dr. Dickson has prescribed the remedy with much advantage, as a tonic and stomachic, in some other cases; and dwells, with justice, on the great benefit which is likely to result from having a medicine of such power concentrated in such a small space.

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* After the extraction of the quinina, the yellow bark is as tasteless as so much wet saw-dust.

In respect to our own experience, we can testify to the powers of this medicine in many diseases of a periodical or recurrent nature, and we had lately an instance where its virtues were exhibited in a very decided manner, and where, from gastric irritability, there was every reason to believe that no other preparation of bark could have been taken in sufficient quantity to arrest the progress of the disease.

A gentleman of rank left town for his country seat in Cheshire, in the beginning of May, of the present year. He attended the races at Chester a few days after his arrival in the country, and was there exposed to the cold easterly winds, at that time prevalent. A few days after the races were over, he was seized with deadly cold chills, rigors, headach, pains in all his limbs, and sickness at stomach. Being of a very delicate and weakly constitution, these symptoms were very alarming, as the pulse fluttered, and sometimes entirely left the wrist, while his whole appearance was most ghastly. These phenomena, after a time, ended, not in reaction, but in cold clammy perspirations, if possible more alarming and distressing than the preceding cold and dry stage. Several hours were passed in this way, when a natural heat very slowly and gradually returned, and the patient continued languid, but free from complaint during the succeeding day. On the morning of the third day he awoke with a pain over the left eyebrow, and two hours later than the period of the former attack, the same paroxysm of cold shivering and cold sweating stages ensued. Four of these attacks had taken place, each preceded by the ominous pain over the eyebrow—each happening on alternate days, and each occurring at a later period, by two hours, than the preceding, when the writer of this article was summoned from town, and arrived on the evening of the apyrexial day. The patient was lying on his sofa, languid and debilitated, with very little appetite, feeble pulse, and blanched altered countenance. On learning the preceding history, it was concluded that the disease was an imperfect ague, and that the want of the hot stage was merely dependent on want of energy in the constitution. The sulphate of quinine was instantly procured from Chester, and ordered in two grain doses every four hours, while cordial draughts of confectio aromatica carbonate of ammonia, tincture of cinchona, &c. were prescribed at similar intervals. Next morning was ushered in with the precursory pain over the left eye, and exactly as the clock struck the hour, the paroxysm came on. It differed only in degree from those already described—and it was shorter in duration. But even in this mitigated form, it was of a very formidable character. For more than three quarters of an hour little or no pulse could be felt in any tangible artery—the skin was of a corpse-like coldness—the mind was wandering—the respiration hurried, short, and the breath expired was actually cold to the hand. There was a universal tremor over the body, with pains and cramps through the limbs and along the spine, with gastric irritability. It ended, as usual, in cold, clammy perspirations, after which the patient fell into a troubled interrupted sleep, and next morning complained only of excessive debility. He was obliged to be wheeled on a sofa from his bed room into one of the sitting rooms this day. The sulphate of quinine and the cordial draughts were now pushed on without interruption, day and night, and he never had another paroxysm. He gradually, but pretty rapidly recovered strength, and in a few days was able to ride round his park.

It is proper, before closing this paper, to observe that two or three practitioners on the Continent have published accounts of the injurious effects of sulphate of quinine. We are not much disposed to wonder at this, considering how timid our continental brethren are in administering purgatives and other evacuants in either acute or chronic complaints;—consequently, the exhibition of this highly powerful tonic, without due preparation, where there are visceral obstructions or disordered secretions, must be expected to be attended with bad effects. Thus Dr. A. Menard has lately published a paper in the November Number of the REVUE MEDICALE, wherein he states that several cases have occurred to him, or come under his observation, where the paroxysms of the disease (intermittent and remittent fevers) had been speedily cut short by the exhibition of this salt, in large doses—but, after several days, the disease had sometimes returned, and attacks of inflammation or engorgement of the liver or spleen, had frequently supervened to the sudden arrest of the febrile paroxysms. He has observed these visceral inflammations and obstructions to have been so often followed by dropsical affections, that he considers these last diseases to have become more common since this remedy has been generally employed. Some other French writers* have also noticed affections of the mucous membrane of the bowels following large doses of the sulphate of quinine. We do not apprehend such consequences in this country, where more attention is paid to sanguineous and intestinal evacuations.

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* Dr. E. Desportes, for example, in Revue Medicale for December last.

We must not pass over entirely unnoticed, the memoir of Dr. Martinet. This gentleman practised in Italy, in the years 1821-2, at Migliarino, a marshy plain near Pisa, and where intermittent and remittent fevers were but too plentiful. His patients were principally peasants, in the prime of life. He first tried comparatively small doses, as ten or twelve grains during the apyrexia; but in this quantity he made no impression on the paroxysms. He then administered from 18 to 24, or 30 grains in the same period, and checked the fever, generally after the first paroxysm. In some cases, of long standing, he was obliged to carry the quantity to 35 grains in the interval of fever. In no instance did he observe any bad effects from the remedy. In some instances, there were symptoms originally of gastro-intestinal irritation or inflammation, and in these he abstained from the remedy till the proper steps were taken for removing the said affections. At Florence, our author pursued the same practice, and with similar success, as also at Rome. He has detailed a number of cases, but these we need not cite.

VI.

MEDICAL JURISPRUDENCE.

INFANTICIDE.

1. *Medical Jurisprudence.* By Dr. PARIS and Mr. FONBLANQUE. Three volumes, 8vo. 1824.
2. *The Principles of Forensic Medicine, systematically arranged and applied to British Practice.* By JOHN GORDON SMITH, M.D. Lecturer on Political Medicine. One volume, 8vo. Second Edition, greatly enlarged. 1824.
3. *Elements of Medical Jurisprudence.* By THEODORE ROMEYN BECK, M.D. Professor of the Institutes of Medicine, &c. in the State of New-York. Two volumes, 8vo. Albany, 1823.
4. *Elements of Juridical or Forensic Medicine, for the Use of Medical Men, Coroners, and Barristers.* By GEORGE EDWARD MALE, M.D. &c. &c. Second Edition, pp. 278. 1818.

OUR readers will perceive that since we commenced our chain of analytical articles on medical jurisprudence, the works on this subject, in the English language, have multiplied fast. Of

Dr. Paris's work, we have already given a pretty full account of the first and part of the second volume; and of the first edition of Dr. Smith's publication, we had occasion to make honourable mention in a former number of this Journal. The *second edition* is now before us, considerably enlarged and improved. It may, therefore, be considered as a standard work of its kind, intermediate, in size, between the works of Drs. Paris and Beck, and well calculated for a large proportion of the profession, in consequence of being portable, cheap, and unencumbered with purely legal discussions. The third on our list, the stranger from America, is really a very respectable performance, and nearly as much to our taste, as any thing we have yet seen on the subject of medical jurisprudence. The fourth work is well deserving of our notice, as being till lately the best work of the kind in the English language. It is said, indeed, to be too concise; but when we consider, that large and expensive books are seldom read by the great body of the profession, we are disposed to think, that Dr. Male's work has proved eminently useful as coming within the easy grasp of all. But as criticism forms an extremely small portion of our business, we shall not waste time, in attempting any comprehensive comparative view of the works before us, which could lead to no practical utility in respect to our readers, and would consequently be at variance with the "ruling passion" of our Journal. In this and our future numbers, we shall select particular subjects of medical jurisprudence for analytical articles, of greater or less extent, taking some *one* of the three works for our principal guide, and drawing information from the others as we see occasion.

In the present instance, we shall give the preference to our transatlantic author, not only from courtesy but from convenience; for we hope we are too free from narrow national prejudice, not to see merit because it happens to be on the North or South side of a channel, or on the East or West side of an ocean. Dr. Beck, indeed, has had good sense enough, not to take the petty effusion of one or two narrow-minded individuals as specimens of a whole nation's feeling—and, therefore, he has treated the writings of his brethren on both sides of the Atlantic with candour, liberality, and good nature—a proper example for all writers in all countries.*

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* The reason why we take Dr. Beck's for our guide is *not* because it is superior to the others (in several instances it is inferior) but because its arrangement enables us to collate and avail ourselves of the information contained in Dr. Paris and Dr. Smith's publications.

INFANTICIDE—FŒTICIDE—PROLICIDE.*

Dr. Beck (or rather his brother, to whom he is indebted for the chapter on infanticide) discusses his subject under five heads :—1st. The history of infanticide—2d. Fœticide, or criminal abortion—3d. Infanticide, or the murder of the child after birth—4th. The method of conducting the anatomical investigation of infanticide—5. The prevention of infanticide, with an examination of the effects of foundling hospitals. We shall endeavour to take a rapid view of each of these.

1. *History of Infanticide.* The love of progeny is so deeply implanted in human nature—indeed in all animated nature, that it seems incredible so forcible a law should ever be broken. Its breach proves that *artificial* feelings will sometimes conquer the strongest *natural* impulses or instincts. Thus, fear of the finger of scorn or ridicule, will induce a mother to imbrue her hands in the blood of her smiling infant!

In the early history of the Jews, infanticide does not appear to have been known—but subsequently, after intercourse with surrounding nations, the sacrifice of children took place. The Canaanites sacrificed their sons and daughters unto devils. Instances are not wanting among the Egyptians of great cruelty towards children, witness Pharaoh's bloody edict to the midwives. Towards their own offspring, however, they were, in general, very humane. Among the ancient Persians the inhumation of living children was common—and in most of the Grecian States infanticide was not merely permitted, but actually enforced by the government. Who knows not the Spartan law, that consigned all weakly or deformed children to the deep cavern at the foot of Mount Taygetus? The horrible edict of the Spartan Legislator was sanctioned by the most profound philosophers—the wise Aristotle—the mild and humane Plato! The Roman fathers were invested with an absolute authority over the lives and fortunes of their children; and history shows us how frequently they availed themselves of this prerogative. Fœticide was notoriously prevalent among the Romans—

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* *Prolicide* is a term introduced by Dr. Smith, and we think with propriety, as signifying the murder of offspring generally; it is the converse of parricide, or the murder of our parents.

Dr. Paris has devoted about 46 pages, Dr. Smith 80, and Dr. Beck 104 pages to the subject under discussion.

Sed jacet aurato vix ulla puerpera lecto,
Tantum artes hujus, tantum medicamina possunt,—
Quo steriles facit, atque homines in ventre necandos
Conducit.—*Juvenal.*

Pliny defends the right of parents to destroy their children, as necessary to keep the increase of population within bounds. Malthus goes on the principle of *prevention*—"principiis obsta." Christianity first checked infanticide in Ancient Rome, as it still does in Modern Europe. But lawful infanticide was not confined to the Ancients. It still disgraces Eastern and Southern Asia. Nine thousand children are annually exposed in the streets of Pekin. We have seen them in the streets of Canton early in the morning—and floating down the Tigris in front of that city in wicker baskets. Among the Hindoos the horrible custom of infanticide is incorporated into their system of religion—or rather superstition. "The blood of their infants (as Dr. Beck forcibly expresses it) seems to have quenched completely the flame of humanity, while the lights of reason and truth are extinguished by the absurdities of superstition." They urge, in excuse, the difficulty of rearing female children, the expense of their education, and the small probability of their getting married. Two modes of infanticide (according to Buchanan) are practised. One consists in the introduction of a piece of opium into the mouth of the female infant—the other is strangling, by means of the umbilical cord round the neck of the child!

Till lately the Otaheiteans were not behind the Chinese and Hindoos in the practice of infanticide. Christianity has checked it there also. But it is unnecessary to extend this slight historical sketch any farther. It is somewhat to the honour of Europe, and the age in which we live, that the act of infanticide is a punishable crime by the laws of the civilized world—and, consequently, that it is only committed in solitary instances, in secret, and when the mind is torn with conflicting passions.

2. *Crime of Fœticide.* It is hardly necessary to say, that the law of the land is most absurd when it makes a difference in the punishment—and, consequently, in the degree of turpitude, between fœticide at three, and fœticide at five months' utero-gestation—in other words, before and after quickening. Every one knows there is no just foundation for this distinction.

When a medical man is called in upon an investigation of this kind, the first thing is to ascertain whether or not there has been an abortion, whether natural, or artificial. In the early months of pregnancy this point is with difficulty determined. The attachments of the fœtus to the uterus are slight —the constitutional changes unimportant—the hæmorrhage trifling. But in the middle and ulterior stages of pregnancy, the characteristics are less equivocal. There is considerable hæmorrhage—an offensive discharge from the vagina, which is dilated—the os uteri is open—the breasts are swollen—the abdomen flaccid and pendulous. The following appearances will be recognised on dissection, in case the mother dies.

> "The uterus is found enlarged and thickened—its muscular fibres are more evident, and its blood-vessels and lymphatics much augmented in size—a rough surface is found where the placenta has been attached —the cervix uteri is relaxed, and the vagina considerably dilated—the ligamenta rotunda are relaxed, and the ligamenta lata nearly effaced, as they furnish the uterus with its external covering. Upon examining the ovaria, if it be done a short time after the ovum has escaped from them, a *corpus luteum* is generally found, which vanishes soon after, but leaves a scar for life." 204.

The causes or agents of artificial abortion (for it would be needless to advert to natural abortion) are medicinal and instrumental. We believe, it is now pretty generally allowed, that there is no medicine which has the specific power of causing abortion. Drastic purgatives, emetics, diuretics, emmenagogues, or repeated venesection may, indeed, so derange the general health and disturb the functions of the system at large, as to induce abortion; but even this is very precarious—and endangers the mother's life as much as that of the infant. Savine and colocynth have had reputation in this way, but their effects are very uncertain, and at all events dangerous. Of all internal medicines the secale cornutum, or ergot of rye, is that most likely to produce the effect in question—but not, we imagine, without great danger to the mother.

Of the instrumental means, there is but one, which is at all safe; and that must be in the hands of the able surgeon. It is, of course, the rupturing of the membranes, as practised for premature delivery in cases of distortion.

> "At Durham assizes, in 1781, Margaret Tinckler was indicted for the murder of Janet Parkinson, by inserting pieces of wood into her womb. The deceased took her bed on the second of July, and from that period thought she must die, making use of various expressions to that effect. She died on the 23d. During her illness, she declared that she was with child by a married man; and he, being fearful, should she be brought to bed, that the knowledge of the circumstance would reach his wife, advised her to go to the prisoner, who was a midwife, to take her advice how to get rid of the child—being at the time five or

six months gone. The delivery took place on the 10th of July, three days previous to which, a person saw the deceased in the prisoner's bed-chamber, when the prisoner took her round the waist, and shook her in a violent manner five or six different times, and tossed her up and down. She was afterward delivered at the prisoner's house. The child was born alive, but died instantly, and it was proved by surgeons, to be perfect. There was no doubt but that the deceased had died by the acceleration of the birth of the child; and upon opening the womb of the mother, it appeared that there were two holes caused by wooden skewers, one of which was mortified, and the other inflamed. Additional symptoms of injury were also discovered."* 217.

It would appear that this delicate operation was not unknown to the ancients. Dr. Paris quotes a passage from Ovid which certainly seems to bear on this subject—

"Vestra quid effoditis subjectis viscera telis,
"Et nondum natis dira venena datis ?"

Tertullian reprobates the practice, and describes the instrument by which it was put in execution.—"Æneum spiculum quo jugulatio ipsa dirigitur, &c."

In concluding the subject of abortion, Dr. Beck makes a remark (in the justice of which we are inclined to coincide) upon the *circumstantial evidence* which may be adduced to prove the guilt of the accused.

"With regard to her concealing her pregnancy, I cannot conceive with what justice any inference can be drawn prejudicial to her character. If her pregnancy be the result of illicit commerce, it is perfectly natural that she should make use of every effort to conceal her disgrace as long as possible. The mere fact of concealment, even if proved, ought to be considered as no evidence whatever of her guilt." 221.

We cannot conceive any thing more cruel than the old Scotch law, which made the mere fact of concealing the pregnancy, whether the death of the child were proved or not, *a capital felony!* Although this law was repealed in 1803, there is still a punishment attached to the concealment.†

3. *Infanticide*. This is, of course, the destruction of the child after its existence has become independent of the mother. There

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* East Crown Law, vol. 1, p. 354. Smith, p. 306.

† We agree with Dr. Smith (2d. ed. p. 332) that the deed of infanticide is frequently the result of insanity, and that a verdict to this effect might be returned, in many cases of this kind, with at least as much truth, as in some cases of suicide. It is in vain to urge that the insanity here is not real because temporary, while temporary insanity is readily admitted in cases of suicide.

is reason to believe, as Dr. Paris has justly remarked, that previously to the time of Dr. William Hunter, many unfortunate women had fallen innocent victims of false theory and prejudice. That distinguished physiologist raised a host of objections against the validity of certain physiological tests of infanticide—objections which have probably operated in swaying the mind from credulity to the opposite extreme of scepticism, and thus brought unmerited distrust on the science of physiology. It is evidently the wish of the three distinguished writers before us to rescue physiology, as far as possible, from this odium, and to restore a certain degree of confidence, at least, to the tests which have been so much depreciated. The first medico-legal question is—*whether the child was born alive?* In a physiological point of view, we are to expect proofs of this in the circulating and respiratory systems:—we can expect little assistance from the nervous system. It is, of course, to be supposed that the child had come to its full period of utero-gestation, at least that it was rearable, or beyond the seventh month. After the above period, the fœtus will generally be found to weigh four pounds—though upon this, as upon most other subjects relating to infanticide, there is great diversity of opinion. Dr. Clarke found that the average weight, *at full term*, was seven pounds five ounces. In France the medium weight is said to be only six pounds and a quarter. In length, the fœtus is said to be about 20 or 21 inches, on an average.

"*Professor Chaussier* has presented us with a scale of relative admeasurements, from which he thinks we may deduce the age of a child. He asserts that at the full term of gestation, the middle of the body of the fœtus corresponds exactly with the umbilicus; at the eighth month it is two or three centimeters higher; that it approaches still nearer the sternum at the seventh month; and at the sixth falls exactly at the abdominal extremity of that bone. If this statement is to be relied upon, we should be able to conclude, says *Dr. Smith*, that when the middle of the length of the body falls at the cartilago ensiformis, the fœtus must be under the seventh month, and consequently could not have continued to live after birth."* Paris, p. 102.

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* Some have supposed* that a perfect child at its full time should weigh eleven or twelve pounds, avoirdupois; that a fœtus at eight months commonly weighs seven or eight pounds; and at seven only about four pounds. Others† have estimated its weight at seven or eight, or at most ten pounds: others again as low as six or seven pounds, and its length from seventeen to twenty-one inches. Mr. Burns‡ says, that a fœtus in the sixth month, measures eight or nine inches, in the seventh about a foot, and in the eighth about fifteen inches. Dr. Hunter states|| that of several thousand

* Mahon. † Manuel d'Autopsie Cadaverique, p. 97. ‡ Principles of Midwifery. p. 121.
|| Anatomical Description of the Gravid Uterus, p. 68.

Proofs from the Circulation. Before separate vitality, Becket found the blood (of animals) alike in the veins and arteries—and that similar to venous blood. He avers that he found the same appearances in the human fœtus in utero. In a chymical point of view, Fourcroy found the fœtal blood destitute of fibrinous matter, as well as of the phosphoric salts. He also found that it was incapable of becoming florid by exposure to the air.

In the fœtal circulation, it is evident that there is blood in the nutrient vessels only of the lungs. If therefore the other vessels be found distended with blood, it forms a reason for supposing the child had breathed. The *structure* of the lungs also will throw some light on the question. The lungs of the fœtus are small, dense, compact, of a deep red or chocolate colour, resembling liver. Their specific gravity (with some exceptions) exceeds that of water; and upon cutting into them no air will issue, nor blood either. These circumstances will be changed, if the child have breathed. The lungs become more voluminous, elastic, florid-red, containing blood and air—*swimming in water*. But this brings us to the *Opprobrium* Medicinæ Forensis, or the—

HYDROSTATIC TEST.

This test, now so much doubted, once enjoyed the unreserved confidence of the public and of the profession at large. Medical evidence, on this point, was then very simple. In fact, a butcher was as good a witness as a physiologist. Whenever suspicion attached to the body of an infant, the lungs were taken out. If they sank, the child was still-born—if they swam, then the child must have lived after birth—"quod signum ad infanticidia detegenda est evidentissimum." *Baglivi.* It was quite

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new-born and perfect children which were weighed at the British Hospital, the smallest was about four pounds, and the largest about eleven pounds two ounces; but by far the greater number were from five to eight pounds, avoirdupois. He adds, that he never knew an instance of a child born at the natural period weighing twelve pounds. Of sixty male and sixty female children, born at the full time, which were weighed by Dr. Clarke,* the lightest was four pounds and the heaviest ten pounds; he found that the average weight of the males was seven pounds five ounces and seven drachms, avoirdupois; that of the females only six pounds eleven ounces and six drachms. The average weight of the fœtus at the full period, therefore, may be estimated at about seven pounds, avoirdupois. As it appears, then, that the weight of new-born children varies exceedingly, evidence founded on such uncertain principles ought to be very cautiously admitted in a court of justice.—*Male, p.* 152. *Second Ed.*

* Philosophical Transactions, 1786.

a witch's trial—and in both cases it was probable that justice did not always kick the beam. It is now well known that, under certain circumstances, the lungs of a fœtus born dead will swim in water, while those of a live-born child will sink in the same fluid. How many innocent females may have been sacrificed to a physiological error, God only knows!*

It is probable, however, that the profession and the bar have now run into an unwarrantable degree of scepticism on this point. Dr. Smith, one of our latest and best forensic writers, has strenuously advocated the general validity of the hydrostatic test—and that by examining the objections which have been made to it. These objections we will notice in as concise a manner as possible.

1. *It is objected that a child may have been born dead, and yet that the lungs may float in water, from the putrefactive process having commenced.*

Strange as it may appear, the putrefactive process, in lungs that have not respired, has been considered by some as rendering them *lighter*—by others, as rendering them *heavier* than water! Experientia fallax! Dr. Beck considers the experiments of Mayer as the most satisfactory on this litigated point.

"From a very extended series of experiments, continued during a number of years, and executed with the utmost care and precision, Mayer found, on putting into water the lungs of still-born children, in whom, of course, no sign of respiration or life had appeared, that they sunk to the bottom. After an interval of two or three days, the water in which they were left became turbid—the lungs changed in colour, and increased in volume—here and there an air bubble arose to the surface of the water, and at the same time a putrid odour became perceptible. All these appearances continued to increase daily, until the sixth, seventh, or, at the latest, the eighth day, when the lungs, both entire and cut into pieces, floated in the water in which they became putrid. On transferring the lungs to vessels containing clean water, they still continued to float, although on the slightest compression they instantly sunk.

"Lungs placed in water, and exposed to the rays of the sun, swam on the sixth day. If they were suffered to putrefy where there was a free current of air, they rarely floated before the tenth or eleventh day. After the lungs had once floated, they remained in that state, emitting daily a more offensive odour, and acquiring an increased volume, until the twenty-first, or at the latest, the thirty-fifth day. After that period, they gradually sunk down, without a single exception, to the bottom of the vessel, nor did they afterward betray any disposition to float, although kept for seven weeks, and in some instances a much greater length of time."* *Beck, p.* 230.

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* Dr. Paris, who admits the great and serious objections to the hydrostatic test, must, we think, have made a mistake in the following passage. "It is now well ascertained, and as generally admitted, that the validity of the hydrostatic test, as usually applied, must afford very *unquestionable* indications." P. 110.

Dr. Beck made experiments of this kind himself, which were confirmatory of Mayer's. It may also be stated, that Haller made the same experiment, and came to the same conclusion.

"Bodies," says Dr. Gordon Smith, "have often been found in a very advanced state of putrefaction, where the lungs were not yet overtaken by it. Ballard was called to examine a child, the muscles of whose face were reduced to a pulp—to '*bouilli*,'—were in a state of putrefactive solution; and in which putrescence had advanced so far as to prevent discrimination of the sex; notwithstanding which the lungs immediately sunk.† These organs resist putrefaction longer than all the other parts of the body, excepting the bones. The fact has been accounted for by their compact structure previous to respiration, and their not having been excited to action, as well as to the impenetrable nature of the membrane in which they are enveloped, it being well adapted to oppose the passage of aëriform agents." *Smith, p.* 351. *2d Edition.*

From the foregoing and other experiments, Dr. Beck comes to the conclusion, that, in the incipient stage of putrefaction, lungs that have never respired will float in water—whereas they will sink, if putrefaction has continued long enough to destroy their organization, and thus extricate all the air contained in them. This is familiarly exemplified in bodies that have been drowned. At first they sink—afterward rise from putrefaction—and finally descend again, upon the extrication of the air. In what way then are we to discriminate between the floating of the lungs as caused by respiration—and that which is the result of decomposition?

"1. By the appearance of air bubbles on the surface of the lungs.

"On this subject, Dr. William Hunter lays down the following rule: 'If the air which is in the lungs be that of respiration, the air bubbles will hardly be visible to the naked eye; but if the air bubbles be large, or if they run in lines along the fissures between the component *lobuli* of the lungs, the air is certainly emphysematous, and not air which had been taken in by breathing.'‡ Jaeger had before this made a similar observation. In lungs floating from putrefaction, he describes the air as contained in the form of bubbles under the external membrane of those organs, where the air introduced by respiration never finds its way.[*] This rule appears to be founded in truth, and accordingly has been adopted by the best writers on forensic medicine.

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* Mayer in Schlegel., vol. 1, p. 262, 3, 4.

† Translation of Metzger. See also Mahon, Med. Legale, II. p. 400.

‡ On the uncertainty of the signs of murder, in the case of bastard children. By William Hunter, M.D. F.R.S. Medical Observations and Inquiries of London. vol. 6, p. 284.

"2. By the ease with which the air can be extricated from lungs which float in consequence of putrefaction. The evidence of this is to be found in the fact, that if lungs of this description, or any portions of them, be squeezed in the hand, they will immediately sink in water. On the contrary, no compression, however strong, can force out so completely the air from lungs that have respired, as to cause them to sink. This test is insisted upon by Marc, a very distinguished writer on this subject, as the most certain means of discriminating between the effects of putrefaction and respiration.[†]

"3. By cutting out a portion of the internal part of the lungs, and putting this in water, to ascertain whether it will float. If the lungs floated as the result of putrefaction, this internal portion will sink, inasmuch as the air generated by decomposition is confined to the surface of the lungs. If, on the contrary, the lungs have respired, the internal part will float more readily even than that toward the surface.

"4. By an examination of the other viscera of the body. Numerous observations have established the fact, that with the exception of the bones, the lungs resist putrefaction longer than any other part of the body. Faissole and Champeau, in experiments which they made upon drowned animals, observed that the lungs remained sound, after the whole of the body had become putrefied.[‡] Mahon noticed the same fact in his dissections of dead bodies.[§] Camper ascertained, by direct experiments, that the head became so far decomposed by putrefaction, that the slightest force was sufficient to detach the bones of it from each other, as well as those of the arms and legs, before the lungs began to participate in the putrefaction."[||] *Beck, p.* 233.

2dly. It is observed, that a still-born child's lungs may be inflated by the mother or others, after birth, and thus made to float in water.

Dr. Smith admits the possibility of this event, and owns the difficulty of proving or disproving it physiologically. Dr. Beck quotes a number of authors, as Heister, Hebenstreet, Roederer, who deny the possibility of inflating the lungs in this manner—and a still greater number of others, as Low, Bohn, Lutwig, Camper, Jaeger, Schmitt, and most of the French and English forensic writers, in favour of the artificial inflation, and consequent floating in water. But although the possibility or practicability of this event cannot now be doubted; yet we are inclined to agree with Drs. Beck and Smith, that it is not very likely to be effected by a female, under the distressing circumstances in which she would, at such a time, be placed. As for this inflation being performed by another, with the diabolical intention of criminating the mother, it is next to impossible, considering the cloud of doubt which now hangs over the hydrostatic test.

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[*] Schlegel, vol. 5, p. 111.

[†] Dictionnaire des Sciences Medicales, vol. 10. art. Docimasie Pulmonaire.

[‡] Mahon, vol. 2, p. 400. [§] Ibid. vol. 2, p. 400.

[||] Dissertation on Infanticide, by W. Hutchinson, M. D. p. 47.

Dr. Beck, however, is confident that this artificial inflation may be distinguished from breathing, by one or more of the following tests.

1st. That of Buttner, founded on the difference between the fœtal and adult circulation. Thus, in the case of *inflation*, the vessels of the lungs would be empty—while, after natural breathing, they would be filled, in a certain degree at least, with blood.

2dly. By Ploucquet's test, which is considered, by some, as an important one. Ploucquet found that the weight of the fœtal lungs (that is, before respiration) was to the weight of the whole body, as 1 to 70—whereas, the weight of the lungs, after respiration has commenced, is as 1 to 35. Thus, the tide of blood to the lungs, in consequence of the breathing process, or separate existence of the child, just doubles their weight.

As both Beck and Smith attach some importance to this test, and have treated largely upon it, we shall here dedicate a page to the subject.

In the first place, Ploucquet's trials were on too confined a scale to render the results certain. Lecieux, among 400 examinations, found such a discrepancy in the proportional weight of the lungs and body, as almost to discourage every expectation of establishing any ratio between them. According to the experiments of Chaussier, Schmitt, and Hartmann, the ratio was very different from that found by Ploucquet. The latter physician found (in the fœtus) as 1 to 59—and, after breathing, as 1 to 48. Here it is evident that the proportions are too nearly the same to permit our drawing any positive conclusions. Mahon and others have objected to this test, that such an excessive congestion of blood might take place in the lungs of a fœtus, *in utero*, as would render them equal in weight to the lungs of a fœtus which had breathed. This Ploucquet himself denies. But it is pretty certain, even from the experiments instituted by Dr. Beck himself, that putrefaction deranges the ratio between the weight of the lungs and body most materially. Thus, in two cases, where breathing had certainly taken place, Dr. B.

found the proportion as 1 to 35, and 1 to 37. In a case where the child was born dead, and where putrefaction had commenced, the proportion was as 1 to 46. In another case, where the child was born dead, and in an incipient state of putrefaction, but where the lungs were sound, the ratio was as 1 to 39. Thus, we see, that in this last case the proportion was almost exactly the same as in a child where breathing had been established. From the little that we have brought forward upon this subject, our readers will be inclined to acquiesce in the sentiment of Dr. Beck, that—"further observations are still called for, to settle the doubts occasioned by testimony so discordant and even contradictory."

The test of Daniel is somewhat similar to that of Ploucquet. He judges of the reality of respiration having taken place, from the increase of weight which a given quantity of water gains upon squeezing out the lungs into it. He thinks it may be known, also, from measuring the periphery of the thorax and lungs, and comparing their dimensions with those of an infant which has not respired. These tests, it is evident, are far inferior to that of Ploucquet.

The descent of the diaphragm, the diminution of the liver, the state of the bladder, &c. may assist in forming our opinion respecting the separate life of the child.

We now come to the various means by which a new-born infant may be destroyed.

These causes have been classed under the heads of *omission* and *commission*. The *former* includes those which prove fatal by the neglect of those precautions which every mother must feel are necessary at such a period—the *latter*, of course, embraces all acts of violence designed to destroy the life of the infant.

1. *Omission.* Death may be caused by omitting to remove the child from a state of supination, in which it may come into the world. Dr. Hunter relates the case of a child who died in consequence of its face lying in a pool made by the uterine discharges, and where no evil design could be imputed to the mother. Danger, or even death, may result from delay in administering nourishment to the newly born. Foderé says, a delay of 24 hours is dangerous. It is said that when death is occasioned by this cause, it may be known by the general emaciation of the body—by the fetid odour exhaled from it—by the eyes being open, and of a red colour; while dissection will show the intestines completely empty—the gall bladder enlarged—the lungs withered, &c.

A great controversy once occurred respecting the fact of danger from neglect of tying the umbilical cord. It was urged that this danger was imaginary, since we see safe parturition take place every day among animals, without any ligature of the funis. But although a child is an animal, it does not follow that he is a calf. Professor Breudil found the umbilical vessels of the latter full of rugæ or folds, throughout their whole course—and in brutes, generally, he ascertained that the vessels of the cord were much smaller than in man, and that when the animal is born, they are, in a measure, closed by a kind of cellular structure. Besides, in brutes, the cord is always torn, not cut, and it was wisely ordained that there should exist a peculiar construction of the vessels tending to interrupt the flow of blood through them, and favour their speedy contraction, when severed. This does not hold good, in the same degree at least, with man. It was designed that *he* should require assistance, in the early periods of his existence. If, therefore, it can be proved that the ligature of the funis has been wilfully neglected—unless through ignorance, as in a first pregnancy—it is fair to impute it to an intention of destroying the child. There have been cases, indeed, where separation of the cord has taken place without hæmorrhage; but these, (as Dr. Smith properly observes) are only exceptions to general rules. Limbs have been shot and torn off, without any loss of blood.

2. *Commission.* The modes of infanticide under this head, are numerous. Thus, premature tying of the umbilical cord may be as fatal as total neglect of the ligature. Umbilical circulation, and pulmonary respiration, are vicarious functions; and if one be interrupted or destroyed before the other is in operation, death will be the consequence. The cord, therefore, should not be tied till breathing is established. Death, however, from this source, could scarcely result from other than ignorance. As for wounds and bruises, the same rules apply to children as to adults. It is necessary, however, to bear in mind that the heads of children are sometimes very much swollen from compression during a difficult parturition. This should not be confounded with that resulting from blows voluntarily inflicted. There have been, unfortunately, but two many instances of infanticide, by the introduction of needles and other sharp instruments into the head and other parts of newly born infants, as Guy Patin's History of the infamous Parisian Midwife exemplifies. In such cases, it is necessary to shave the head, when a slight ecchymosis will be found around the puncture.

Suffocation. Children are often suffocated by being placed under bedding, hay, chaff, mud, earth, &c. and, indeed, the mere application of the hand to the face of a helpless infant, will be sufficient to take away its life. Besides the usual marks of turgescence in the lungs, it will often be found that when an infant is smothered among any of the above-mentioned substances, some particles may be detected in the mouth or nostrils. A careful examination of these parts should never be neglected.

Drowning. If a child have been immersed in water, the questions to be determined are—was it born alive?—was it put into the water before or after death?—The signs of drowning are precisely the same in the infant as in the adult, and need not here be discussed.

In respect to *hanging* and *strangulation*, the mark of the cord will be found round the neck—or ecchymoses, livor of the face, swelling and projection of the tongue, froth in the mouth, &c. will assist our judgments. On dissection, the vessels of the head will be found gorged with blood.* An objection lies against the signs above mentioned—namely, that they may be the result of accidental strangulation, from the umbilical cord encircling the neck of the infant in utero.

These instances have undoubtedly occurred, but they are rare, and can only happen when the cord is of an extraordinary length.

In *these* cases the child cannot have respired, and therefore we have all the docimasial tests to assist us. In cases of wilful strangulation too, there will generally be found some marks of the fingers, or excoriations of the skin, both of which would be absent in natural strangulation by the funis.

The child may be suffocated by the turning back of the tongue upon the epiglottis—or life destroyed by twisting the head, so as to luxate and fracture the cervical vertebræ—by exposure to noxious airs—by poisons, &c.

But we must draw this short medico-legal sketch to a close, by an extract from Dr. Gordon Smith's "Practical Application," as laid in the second edition of his very excellent work.

"These great cavities being laid open, before we venture to handle any of their contents, we should take a general but an accurate view of their relative aspect; as regards the diaphragm, in particular, whether it be remarkably arched toward the thorax, or of the usual figure in the bodies of those who have lived for some time. It will save inconvenience and promote accuracy, if the abdominal viscera be removed before those of the thorax be meddled with. First, however, let the position of the lungs be carefully remarked, how much of the cavities of the thorax they appear to occupy, likewise their colour, and general appearance in other respects. The liver should also be examined, and its sound or morbid state ascertained. The whole intestinal canal should be then removed, in the manner directed when treating of poisons.* Let the urinary bladder be examined as to its state in respect of distention or emptiness; and if any evacuation should have been caused by accidental interference, it is a circumstance that must not be left out of the account. The presence of fluids in the abdominal cavity must be looked for; and if there be any, their nature and origin should be verified—and any unusual or morbid appearance, as, for instance, of inflammation or lesion from violence, is of great importance.

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* From the facts which will be found detailed in our review of Dr. Kellie's paper, it is doubtful whether the above phenomena be not the offspring of speculation in the closet, rather than actual anatomical investigations.—Rev.

"We now return to the thorax. It is impossible that the practitioner can forget the importance of the lungs, or overlook what is to be performed with them; but if he should inadvertently resort to one step of the process before another that should have preceded, he will mar the whole of his work—and in a court of justice will find himself in an awkward dilemma, being either compelled to make the humiliating admission of the truth, or reduced to shift unwarrantably the want of conclusions to the inapplicability of the subject—or, (which cannot be contemplated) draw such as are false. There is but one order in which the steps can be taken, and if, after having pursued the investigation fairly to the end, the result prove unsatisfactory, the professional witness will be at least able to speak boldly, and to maintain his own reputation.

"It will be necessary to ascertain whether there are adhesions between the lungs and the pleura costalis. If so, they must be noted, and separated by the finger with all possible delicacy. It is a principle to be strictly kept in view, that these organs are to undergo no more handling than is absolutely necessary. We now take out the lungs, separating them from the trachea as low as can be done with convenience; but as it is proper to preserve the heart in connexion with them in the first instance, ligatures must be placed upon the vena cava and aorta. Let the lungs be sponged clean, if covered with blood, and their consistence, soundness, and colour carefully verified. If any part seems morbid, or affected by putrefaction, let it be scrupulously noticed. They should be held inverted over a clean glass vessel, that if any fluid be ready to escape, it may be preserved. They are then to be weighed accurately, by drachms rather than ounces.

"A vessel about the size of a washing basin, and deeper, if it can be obtained, having been prepared, nearly full of clear fresh water, let the lungs be gently placed in it; and while they remain undisturbed, the following circumstances are to be carefully remarked: whether they sink or float—and if the former, whether they descend to the bottom—

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* Article *Arsenic*.

rapidly or slowly—or, if they remain suspended in the water, at what depth. If they float, observe if the buoyancy is decided and general, or if one portion floats while another sinks. The result being recorded, place a ligature on the pulmonary vessels; separate the heart, by cutting between it and the ligature; reserve this organ for inspection; weigh the lungs alone, and place them a second time in the vessel of water. The appearances are again to be noticed in the same manner as before.

"If the corroborative proof of Daniel, mentioned above, can be performed, (and I see no reason for not adding it) the lungs are to be kept in the balance according to his instructions; but I would recommend the simplification of the experiment in this way—rejecting both the scales and the silver-wire basket for sinking the lungs. Let the practitioner place his hand in the water till it reaches any given height toward the arm, and mark the height to which, the fluid is thereby raised upon the scale. Then let him sink the lungs under his hand, taking care to immerse it till the water reaches the same height as to his arm: and observe how much higher it stands then upon the scale. Solid bodies displace a quantity of water equal to their bulk.

"The next step in the process is to divide the right lung from the left, and to try them in the water separately. We must note any difference that appears in their degree of buoyancy; whether one sinks while the other floats; and if one floats more freely than the other it is of great consequence to ascertain whether it be the right or the left. The number and distribution of the lobes* should be remarked, whether there be three in the right lung and two in the left, or any variation from this the natural arrangement. The knife may now be applied, and when cutting through their substance we must be watchful for the crepitating sound that will issue from the cells, if they contain air, as well as to mark the appearance of hæmorrhage. Each lung, being cut in pieces, is to be tried thus in water, and any differences in respect of buoyancy are to be carefully noted. They are then to be pressed as forcibly as possible in the hand, or in a towel, and tried in water once more.

"The heart is next to be taken, and carefully inspected, beginning with the vessels. The ductus arteriosus should be laid open; and it is necessary to remark whether it contains blood, or is empty: the auricles and ventricles must be examined; and the circumstance of congestion there will excite suspicion of death by suffocation. The state of the foramen ovale lastly demands attention.

"It will be profitable to recapitulate here the import of the appearances we may suppose to have been discovered in the course of this investigation. If the diaphragm be very convex towards the thorax; and the lungs of a dark red colour, retracted from the anterior part of their cavities, not covering the pericardium, of a firm consistence, sink in water under every variety of trial, emit no sound when cut into, and effuse no blood—when, along with these circumstances, blood is discovered in the ductus arteriosus, and the foramen ovale of the heart is open, the conclusion must be that respiration has never been performed. On the other hand, if we find that the lungs fill their cavities, are of a pink or light red colour, elastic to the touch, swim high in water, make a crepitating noise, and pour out florid blood on cutting into them, we have considerable proof that breathing has taken place: and if to these we should be able to add the corroborative result as to *absolute weight*, the mass of physiological evidence will be strong indeed. The mere fact of respiration not having been performed, is not, it seems, to be received as evidence that the child was not born alive. In this case all we can do is to declare that we can throw no further light on the matter from professional research, and leave it to law and justice to deal with the case in their own way. We should nevertheless continue the dissection, as we may, perhaps, ascertain more positively from other appearances, whether the child could have come into the world alive." 378.

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* There is a very common *error*—for it goes beyond an inaccuracy—even among good writers, in regard to the lungs: they talk of the right and left *lobe*. It would not be much worse to say the right or left *lip*. We have two lungs as well as two eyes, but their lobes are no more designated right and left than the palpebræ.

In the above short article on infanticide, we do not pretend that we have done any thing like justice to the subject—indeed it would have been impossible in the narrow limits within which we were unavoidably placed. But we hope that, in the short space which we have occupied, we have crowded in as many of the more important facts and features of the discussion as could well be done under such circumstances—and that, by so doing from time to time, we shall draw the attention of our readers to, and keep it fixed upon, the important study of Forensic Medicine. Our reasons for so earnestly recommending this study, are not the same as those which forensic writers generally offer. The *forensic* application of these studies (very important no doubt in itself) we consider as chiefly useful in affording a new stimulus or impulse to the general study of anatomy, physiology, pathology, toxicology, &c.—for, in fine, Forensic Medicine embraces every department of the extended circle of medical science, and whoever is well grounded in his profession, will be a good forensic witness. We shall, on this account, select a forensic article for each Number of the Journal, in future, convinced that we cannot take a better mode of furthering the general progress of medical science, and the general interests of medical practitioners.*

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* Just as this sheet was passing the press, we received the Philadelphia Journal of the Med. Sciences for May, 1824, in which Dr. Beck's work is reviewed. We were sorry to see the reviewer indulge in a sweeping (and we must say illiberal) reflection on the literary and moral character of the European Medical Journals and Journalists, a reflection which comes with a bad grace in a Journal that takes for its *detestation motto*, a somewhat similar passage from the Edinburgh Review. We know not whe-

VII.

Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland.— Vol. fourth. 8vo. pp. 452, plates. Dublin and London, April, 1824.

These Transactions took a higher stand from the very first than their cotemporaries of the British Isles, and every candid examiner must acknowledge, that they continue to maintain the vantage ground, and decidedly to cast in the shade every series of transactions, emanating from similar associations East of the Irish Channel. Superiority in numbers, whether in war, literature, or science, does not necessarily ensure victory. When we compare the Association of Members in Dublin, with the "Members of the Medico-chirurgical Society," in London, it is a Spartan handful to a Persian Host! And when we examine the late volumes which these bodies have sent into the world—but comparisons are odious, and we shall pursue them no farther.

The work under review contains thirty-five articles. We shall deviate from the mode which we have hitherto pursued in analyzing volumes of this description. We shall select for our Review department, those papers which involve or bear upon general principles, and, with a few exceptions, consign the analysis of insulated facts or cases to our Periscope, where they will fall in, according to the nature of the subject, under their appropriate heads.

Art. I.

Observations on a Species of Premature Labour to which Pregnant Women are not unfrequently liable. By an experienced Physician.

The experienced physician should have affixed his name to this communication. Doubtless it is known to the association, or at least to the member (Dr. Brooke) who introduced the paper. We do not make this remark, with the view of detracting from the merit of anonymous writings. There are some species of literature which are properly anonymous—as reviews—and no other plan ever did or ever can succeed in that line. The late Mr. Cumberland tried nominal criticism, and it failed, although many of the articles were of sterling merit, and would

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ther we are included in, or excluded from, the very few exceptions which this censorious critic admits; but in whatever class, we cannot help considering the judgment as infinitely too severe.—*Rev.*

have excited great attention had they been anonymous. But in the transactions of a society, where matters of fact and experience are to be recorded, the name of the writer adds weight to the communication, and the concealment of it generally raises doubts in the mind of the reader.

The species of miscarriage, under consideration, is as distressing to the patient as it is perplexing to the physician. Having consulted men and books respecting it, without much satisfactory information, our author wishes to excite the attention, and, if possible, collect the observations of others in regard to it, through the medium of the press. The species of miscarriage is this:—

> "A lady, apparently healthy, conceives and carries her child in the usual way, till about the seventh or eighth month of pregnancy, she by degrees ceases to perceive the motions of her child; and in about *ten* days or a *fortnight after* this event, she falls in labour, and a fœtus, evidently dead for some time, is expelled. This often happens three, four, five, or six times in succession, or perhaps more frequently, to the same patient, and about the same period of pregnancy. The first time such accident happens, there has generally been some cause to weaken the patient, during gestation; but, in the subsequent instances, it rarely happens that any adequate cause can be assigned. Women who have borne many healthy children have sometimes fallen into this pernicious habit, and continued it for a length of time, and afterward had *living* children. A memorable instance of this kind occurred in the lady of a Viceroy in Ireland, about thirty years ago. In such cases, it is evident that miscarriage happens in consequence of the fœtus dying in utero." 28.

Our author asks, what are the most likely means of preventing the death of the fœtus in utero? Is it not reasonable to suppose, that the existence of the child must intimately depend on the *quantity or quality* of the fluids supplied by her?

In some cases, he observes, we have reason to think that more blood circulates in the mother's system than is consistent with the health of the fœtus—but more frequently the reverse is the case. In not a few cases he has been led to suspect *acrimony* in the fluids of the mother. "By the imprudence of husbands a venereal taint has been sometimes acquired, which required the use of mercury, and which perhaps has been insufficiently employed. The wives of such are particularly liable to the disease in question, although no unequivocal venereal symptoms shall exist." "The most likely method then, of preventing the death of the fœtus in utero, is to consider whether in the mother's constitution, there be symptoms of *redundant*, *deficient*, or *acrimonious* blood. The symptoms of the first two states need not be alluded to, as they are well known.

"I have only to remark under the second head, that, in some such cases, I have had reason to think very small bleedings, at distant intervals, of use, although little indicated by symptoms. Was this by creating a tendency to plethora? This is an effect of which venesection has been accused. Symptoms of acrimony in the fluids are more equivocal and uncertain, as well as the means of correcting it.

"In the *unimpregnated* state, sulphureous mineral waters, goat's whey in the proper season, tepid bathing, strong decoctions of sarsaparilla, and slight mercurial courses, may be tried. Where there are no decided syphilitic symptoms on *either* parent, and a healthy child in existence, and assurances of no subsequent exposure to recent infection, it appears rather unreasonable to press the use of mercury to any extent, and indeed it will seldom be submitted to." 30.

The experienced are requested to forward to the association any facts tending to illustrate this obscure and interesting subject.

In answer to these queries, a letter was read to the association from Dr. Beatty. The species of premature labour, described at the beginning of this article, early attracted Dr. Beatty's attention, and still continues to do so. As far back as 1789 when Dr. B. was resident assistant at the Dublin Lying-in-Hospital, he delivered a woman of a putrid child in the eighth month of pregnancy, and was informed, that this had been the case several times before, so that she despaired of having living issue. Suspecting a venereal taint, he proposed a course of mercury and separate beds. The proposal was complied with, and the result was a living child, in due time after the mercury had been discontinued. Several similar cases occurred to Dr. B. from that time with similar success, but which he passes over, as resting on his individual experience. He adduces some instances, however, where he was assisted by others, as Mr. Colles, Mr. Todd, &c. in their capacity as surgeons. We shall here introduce a case or two in illustration.

"In my case book, to which I have referred, I find that in August, 1812, I attended the wife of a staymaker, who was delivered of a putrid child in the seventh or eighth month, which, she said, was the third that she had borne dead. I discovered so much of venereal affection, as to recommend that they should put themselves under the care of some experienced surgeon for the use of mercury. They applied to Mr. Colles; and when she was pregnant in the following year, Mr. Colles told me that they had not continued a sufficient time under his directions to satisfy him they were cured of the venereal complaint; which I found to be the case in July, 1813, when I delivered her again of a putrid child in the eighth month. I then declared that I never would attend her again, until Mr. Colles told me that he was satisfied with the result of the mercury used. They again returned to him, and fully attending to his directions, in October, 1814, I attended her, when she bore a living girl at the full period of gestation. She has had several living children since.

"In October, 1816, I delivered the wife of a cavalry officer of a putrid child on the eighth month. The gentleman had been on the Continent with his regiment without his wife, and had contracted a slight venereal complaint, of which his surgeon considered him well before his wife joined him in France. I could not detect any venereal symptom in the parents, but was so satisfied with the cause of the child's death, from the peculiar appearances on the body, that I recommended them to consult some eminent surgeon; and Mr. Todd was called in, who met the regimental surgeon with me, and advised the use of mercury, which was regularly persevered in by both for several weeks. After this course pregnancy was soon the result, and in November, 1817, I had the gratification of attending her when she had a living girl. She has had several living children since." 33.

Dr. B. relates several other cases of a similar nature, and adds that "he never attended any person who had dead children, and whom he suspected of venereal complaints, who did not readily submit to mercury, so strong and general is the desire for posterity," excepting one, a celebrated Courtezan, who every year produced a dead child, and would never take any means to alter this state. To the question then, "what are the most likely means to prevent the death of the fœtus in utero? he would answer—"*the use of mercury.*" It has, in every instance, succeeded with him, and he has not met with any case which he thought safe to commit to the use of mineral waters, or the other means suggested by the anonymous inquirer.

"I have," says Dr Beatty, "met with several cases wherein very delicate women have borne dead children at the seventh month, but not putrid; and have, where I did not suspect venereal taint, constantly succeeded in avoiding the accident by a rigid confinement even to one floor, and by a very strict attention to keep the bowels gently free, from the earliest period of gestation to the end of the eighth month; and several, to whom I gave permission to go out at that time, have thanked me, saying that they were never so happy as in their confinement, and would not accept of my offered emancipation. I do not remember a single instance where good health, good looks, and a continuation of bearing living children, were not the rewards of the confinement." 36.

We think the above observations of so experienced a physician-accoucheur as Dr. Beatty, entitled to serious reflection by every one engaged in obstetric practice.

Art. II.

On Tinea. By John Crampton, M.D.

Considered as a mere local affection, occurring generally at a certain time of age, and not involving any danger to the patient's life, tinea has perhaps attracted less attention than might have been expected; and is often consigned to the care of the nurse, or nostrum-monger. It frequently, however, baffles the skill of the regular practitioner.

Our author is not aware, that there is any fixed principle or settled mode of treatment in this complaint. "Most of those," says he, "who have to prescribe for cases of tinea, adopt an experimental mode of proceeding, using various topical applications, abandoning each remedy after a short trial, and changing to others in succession equally ineffectual." On this and other accounts, Dr. Crampton is induced to offer a few observations on tinea, founded on the experience of twenty-eight cases, where he had a fair opportunity of seeing most of the forms of the disorder, and appreciating the different modes of treatment usually adopted. The patients were children from the Bedford Asylum:—they were all cured in the space of six months, some of them in a period much within that time. He does not pretend to say that none of these children had any relapse—but these relapses were very slight, and of short continuance.

There was considerable variety in the appearances of the heads of these children, according to the duration of the complaint, and the constitution of the individual; and there might be some foundation, he observes, for dividing it into the several species which Sauvages, Willan, Bateman, and Alibert have attempted to establish. Our author began by having the scalp shaved, and then the crusts or scales removed by soap and water, with poultices. After this, various external applications, such as are recommended by the different writers, were used, and they all failed—or at all events, gave but temporary relief.

"Having exhausted my patience with trials of the different topicals enumerated, as well as others needless to mention, I had by this time an opportunity of witnessing the effects of constitutional treatment in some of the patients, who require it for morbid affections independent of Tinea. Some of the children had feverish attacks, where purgatives were repeatedly given, and, in some instances, venesection was resorted to: the amended appearance of the local complaint, under this discipline employed to subdue fever, soon encouraged me to give aperient medicines every second or third day to all the children. Saline purges were preferred; their influence, after making comparative essays of different cathartics, appeared to be most decisive.

"It was further observed, that the scrofulous children with large bellies, and other descriptions of patients where rhubarb and other tonic purgatives were exhibited, in addition to an amended state of general health, seemed to improve as to the local disease, with more celerity than otherwise healthy children, where topicals only were employed.

"Another expedient which had been adopted also, with views originally unconnected with the treatment of Tinea, I found showed a considerable share of power in advancing the cure. Warm baths had been directed for several inmates of these wards, when the skin was observed to be harsh and dirty, also for those who were convalescent from feverish attacks; in addition to an ameliorated state of the skin in general, and of the cutaneous secretion, the appearance of the scalp was palpably and materially improved in those who took these baths.

"I had thus, after some time, learned from experience to appreciate the advantage of constitutional treatment, and to trust less to topicals; I discarded therefore the variety hitherto in use, and confined myself chiefly to simple poultices, aided by a constant use of purgatives and the tepid bath. A certain number of the children were bathed every evening in turn, so that each of them had a bath every third or fourth evening.

"The treatment which I finally adopted, was first to use poultices, giving cathartics every second morning, and the bath every third evening; during the time the poultices were discontinued, the liniment with lime-water and oil was applied." 60.

When the common oatmeal poultice was not sufficiently strong to remove the crusts, one was constructed of soap, reduced to a stiff jelly. This poultice was productive of rapid amendment. It very quickly dissolved and removed all hardened, lymphy, and other morbid secretions, though it was considered by the patients as a very drawing and rather severe application, occasioning some irritation and smarting. This, however, as well as every other external means, failed eventually, unless accompanied by the internal or constitutional treatment above mentioned.

For Dr. Crampton's commentaries on the sentiments of Alibert, Bateman, Plumbe, and other dermological writers, we must refer to the volume itself.

ART. III.

Case of fatal Result from Mercurial Ointment. By J. CRAMPTON, M.D.

We fear that the mystery which hangs about the peculiarities of constitution giving rise to mercurial diseases, will not be unveiled by Dr. Crampton's present paper. That those who have made *post mortem* examinations, in such cases, may have neglected to ascertain the state of the mucous membrane of the intestinal canal is highly probable, for it is very true, as Dr. C. observes, that, "until within the last twenty years," (he might have brought the period much lower, and applied the reproach to very many of the present day) "in the examination of bodies after death, anatomists rarely slit open the intestines to examine their inner membranes, satisfied if on their exterior they presented the usual healthy appearances."

Much has been written by Toxicologists and others respecting the effects which the oxydes of quicksilver produce on the stomach and bowels, when given internally in an over-dose; but our author has not been able to find any observation as to the lesions of texture induced by the external application of mercury, in the form of ointment, except where patients have fallen victims to its severe effects on the mouth and fauces. It is on this account he has been induced to record the following case, more especially "as the light which dissection throws on it may (he thinks) enable us, by an appropriate treatment, to save patients, who might otherwise fall victims to the same fatal train of symptoms." We shall considerably abridge the case.

J. Jones, æt. 20, naturally robust, was admitted into the Whitworth Chronic Hospital on the 7th November, 1821, for ascites and general anasarca. Cathartics and diuretics having failed, he was ordered, on the 30th of November, to rub in half a drachm, twice a day, of mercurial ointment on the abdomen. When three drachms of the ointment were used the mouth became sore, and the frictions were discontinued. He was then directed gentle aperients daily. On the 8th December the parotid and submaxillary glands, together with the whole integuments of the face, became much swollen, the secretion of saliva being still copious. Twelve leeches were applied to the tumid gland, which afforded some relief. On the 10th, the pulse being full and frequent, blood was taken from the arm, and two days afterward 15 leeches applied to the tumid parts.—14th, the breathing was alarmingly laborious, and 15 ounces of blood were abstracted from the arm. On the 15th and 16th, blood was discharged with the saliva, and there was every appearance of amendment; but on the night of the 16th, the salivary discharge ceased—the swollen countenance subsided—the tumour of the glands and the swellings of the abdomen disappeared. The patient lay in a state of stupor, as if labouring under an apoplectic fit, his breathing stertorous, pupils insensible to light, powers of speech and motion abolished. "Apparently there was every reason to suppose that effusion had taken place, either into the ventricles or between the meninges of the brain." He died on the night of the seventeenth.

Dissection. No anasarca—no prominence of the abdomen. Dura mater slightly opake and thickened—no preternatural turgescence of the blood-vessels or effusion into the ventricles. Thoracic viscera were healthy. In the abdomen five or six ounces of fluid—liver enlarged and diseased—mucous membrane of the small intestines, more especially of the ileum, of a bluish green colour, ulcerated in many parts, " or rather appearing as if corroded by some active chemical substance.

> "On reviewing the appearances after death, and comparing them with the symptoms, the first remark which occurs is the uncertainty of medical prognosis. Antecedent to death, almost any physician of experience would have pronounced the disease apoplexy of the metastatic kind; that serous effusion took place suddenly on the disappearance of dropsy from other cavities; or that rupture and extravasation of blood occurred from the new determination excited by the mercurial irritation. Of such occurrences in dropsical diseases I have seen several instances, where the appearances just described, of effusion, &c. were found in the brain on examination after death. Such sudden transitions have, according to my experience, happened oftener where mercury was early employed, than under other modes of treatment. I have not observed such sudden and such fatal metastases since I have been in the habit of using the lancet, and other modes of sanguineous depletion, in recent cases of dropsy; after the removal of inflammatory symptoms, mercury here, as in other diseases, is safer and more likely to achieve what the practitioner may desire." 99.

A careful review of this case does not lead us so straight forward to Dr. C.'s conclusions, as he may expect. We confess we cannot clearly see how this case shows us, " what particular texture is affected, where mercury, *by inunction*, proves injurious, and how death takes place." The ulceration in the mucous membrane of the intestines is singled out by Dr. Crampton from among other lesions, and pronounced, without a shadow of proof, as the effect of three days' mercurial inunction, while a diseased liver, and thickened dura mater are matters quite unworthy of notice. Has Dr. Crampton never seen ulceration of the mucous membrane take place when no mercury was rubbed on the surface? What becomes of Dr. Broussais's researches, in which this state is shown to obtain in almost all febrile affections, whether mercury may have been administered or not?—In fine, we venture to differ from our able and respected author, not only as to the ulceration being the effect of mercurial friction, but as to its being the cause of death. The very day before dissolution Dr. Crampton thought the patient would recover—but suddenly a state resembling apoplexy supervenes, and the man dies. Is this like death from ulceration of the bowels? The man died, in our humble opinion, from cerebral affection; and if Dr. Crampton expects to find organic and visible changes in the brain, in every case where death results from its physiological lesions, he will be greatly disappointed. We have no objection to the following therapeutical observations.

> "As to the mode of prevention, or the method of treating diseases arising from mercury, an observation or two will suffice: indeed, there is less hazard now of meeting with such occurrences, as patients are generally prepared, previous to a mercurial course, by purging, by low diet, by the antiphlogistic regimen, and in some instances, by detractions of blood. The mercury is not thrown in at once, as was formerly the expression and mode of practice, at a time when the constitution was perhaps already too much excited from other causes, and when the remedy was taken much to the disadvantage of the patient. If these precautions are observed there will be less chance of any unpleasant symptoms arising from the use of the remedy, than if it is adopted with more precipitancy.
>
> "When symptoms, such as are described in the case which makes the subject of this paper, are met with, a treatment suited to prevent and remove intestinal inflammation should at once be adopted. Remedies also to counteract the disordered state of the cerebral functions should be prescribed. On either of these points of practice I feel it unnecessary at present to expatiate." 107.

Art. IV.

Case of Chorea. By John Crampton, M.D.

Our author, who appears to be a liberal contributor to this volume, observes that little light has been thrown on chorea by anatomical investigation. Practical writers have, however, endeavoured to supply the deficiency, and experience has furnished us with many remedies for this curious disorder. The following case is remarkable as occurring in an adult—and at a period of life when such a disease is little to be expected. The instance, however, is not solitary, as Dr. Maton has related a case of chorea occurring in a woman 70 years of age.

Case. Anne M'Kelvey, ætat. 42, unmarried, was admitted into the Whitworth Hospital, 12th February, 1821, labouring under a severe paroxysm of chorea which had lasted five days. The hands and legs, sometimes one, sometimes all, are affected with a hurried convulsive motion, appearing to the spectator as if the patient were beating time to a musical instrument. She speaks in a hurried manner, and expresses great uneasiness when any of the limbs affected are held by another person. The bowels are constipated, tongue looks unhealthy, pulse weak and slow, no catamenia the last two years. She had had uninterrupted health previous to September 1819, at which time she became affected with hysteria, and continued subject to it until about twelve months ago. It was four months since the chorea first appeared. She was directed to have a fetid enema, and afterward to have every night some rhubarb, hyoscyamus, blue pill, and colocynth to act on the bowels. She was also directed to take a quarter of a grain of the argentum nitratum thrice a day. This last was gradually increased to two grains three times a day, until the 20th March, when it was omitted, the chorea having entirely disappeared.

The pathology of chorea is unsettled, and so is the treatment. The following remark is all we shall extract from Dr. Crampton's observations on this complaint.

> "Although certain general principles should guide our practice, yet it would appear that no settled plan, no specific remedies, can apply generally to all cases of Chorea we may meet with. Our measures must be varied according to the particular organ or system which seems to suffer most: at one time our views must be directed to the vascular system in the head, also to the state of the liver and digestive organs; again, the condition of the nervous system chiefly claims attention. In other instances a combined treatment must be adopted, using at the same time both evacuants and nervous medicines." 121.

ART. V.

Cases of Hydrocephalic Fever. By HENRY BALDWIN EVANSON, M.B. R.I.A.

The two first cases died in a day or two after they came under the care of the reporter, and on dissection presented the usual appearances. The third case was that of a boy, ten years of age, who was found by our author lying in a state of stupor, apparently in the second stage of the disorder. When spoken earnestly to, he replies distinctly—raises his eyes with difficulty—pupils dilated, but moveable—tongue very foul and yellow—pulse not much accelerated—general uneasiness, but no distinct pain—slight vomiting.

> "Had this been a solitary case it might perhaps have been mistaken for fever; but the dilated pupils, the dark green, ponderous and slimy stools, and the previous history, sufficiently designate the disease. Leeches, vinegar and water externally, calomel, and the common senna mixture, were immediately brought into use, but the next day he was much worse; coma had increased, and his tongue and nostrils were covered with a crust as black as soot. Leeches were again applied, and

he was ordered *submur. hyd.* gr. iii. *pulv. Jac. veri*, gr. iss. every fourth hour, the purging mixture being continued as before."

Profuse bleeding took place from the leech-bites, one of the branches of the temporal artery having been cut. A blister was applied to the neck, and a discharge kept up by savin cerate. There was a manifest improvement after this, and by persevering with the powders, the crust soon came away from his tongue and nostrils. This improvement, however, was but temporary, as the alarming symptoms soon recurred—his speech thick and faltering, like that of an apoplectic—vision appearing double. The acetum colchici was now given, with camphor mixture.

"When he had taken two-thirds of this, the double vision was gone, and his bowels and kidneys were acted on so powerfully, that it was deemed right to omit the mixture until next visit. But we had no reason to congratulate ourselves on doing so, for he fell back again, and we found it necessary to put him under its influence as quickly as possible, at an increased dose. This mixture was subsequently continued at varied intervals, of double strength; and lastly, its diuretic power was increased by adding acet. potassæ, ℥ii. The quantity of urine it produced *per diem* was generally about ℔ iv. It sometimes sickened the patient's stomach; and latterly there was a good deal of pain about the neck of the bladder." 159.

When the third stage declared itself, they gave opium—fifteen drops of the tincture in camphor mixture every night. "This was found most effectual after copious depletion by leeches." These were applied to the temples twelve times in the course of the disorder, from eight to ten at a time, but always with advantage. A high degree of delirium sometimes remained after the blood ceased to flow, but the opiate then took effect. An eruption was exuded on each tibia by the tartar emetic ointment. The above three cases were three members of the same family.

"In proposing a new remedy, I feel anxious to have it understood, that I look upon it merely as an additional weapon, which will not supersede any of those wielded hitherto, except digitalis, and that not in all cases. Of those in use, blood-letting, purgatives, and mercurials, hold the first rank. The first of these is the basis of all the rest, yet it is not employed with freedom among medical men *at large*. Some withhold the lancet from timidity, and others trust too much to purgatives, &c. The debility attending this disorder is not such as we see in typhus, in which, notwithstanding the state of the blood-vessels, we find it highly beneficial to draw off a moderate quantity of their contents by one or more abstraction of blood either local or general; surely then we should avail ourselves of the lancet with boldness in every stage of this disease, except in the stage of collapse, as the termination of the disorder is proved to be the consequence of increased action in one set of vessels, or of congestion in the other; both these states most probably exist in concurrence. I see nothing to forbid general blood-letting in the third stage but a feeble or thready pulse, connected with a sinking and exhausted state; mere local depletion seems sufficiently active only for very young children." 164.

The chief efficacy of the colchicum (if it possess any) consists, thinks our author, in its power of promoting secretion.

For Dr. Evanson's criticisms on Dr. Golis's treatise, we must refer to the work itself. We fear Dr. E. is very inadequate to the task of commentator on such a man as Golis.

ART. VI.

A Letter on Variola after Vaccination. By JOSEPH CLARKE, M.D.

Much of the alarm, Dr. Clarke thinks, respecting the security of vaccination, has arisen from want of due attention to a few words of Dr. Cullen's definition of variola—"Papulæ phlegmonodeæ, quæ spatio *octodierum* in *suppurationem* abeunt."

> "Can it be deemed unreasonable to ask practitioners to keep these words constantly in mind, and to wait with patience till the eighth day after the eruption. If pus can *then* be found in the pustules, the existence of variola can no longer be doubted; but until this period arrives, no prudent man should venture positively to decide. Let it be remembered that varicella is defined by the same high authority—"Pustulæ, variolæ similes, vix in suppurationem euntes, et post paucos dies desinentes." 182.

In several recent cases, variola and varicella, says Dr. C. have been confounded by practitioners of experience and ability. "These errors must have arisen from opinions formed before the *duration or contents* of the pustules could be ascertained." The purport of the following remark is to guard his brethren against hasty and erroneous judgments, which unnecessarily disturb the peace of families, and tend to throw discredit on medical science.

> "During the last few years I have seen many cases of spurious eruption, very like, in all symptoms, to severe smallpox, for the first eight nine or ten days, from sickening. On the sixth day of the eruption, or at latest on the seventh, the pustules declined rapidly, the fever subsided, and on the eighth day not a vestige of pus was discoverable. Had these been cases of genuine variola, the patients, instead of amendment on the sixth day of eruption, would have remained in a state of increasing danger for many days, and would have experienced a slow recovery." 183.

At the same time Dr. Clarke does not contend for the absolute infallibility of vaccination. Although failures must be expected to multiply as the practice gets into the hands of ignorant men, yet it is satisfactory to learn that, "since the beginning of this century, when vaccination was introduced generally among the upper ranks in Dublin, no family has lost a child in previous good health, by smallpox after vaccination—nor has even one eye been extinguished by this pestilential disease."

Two of the worst cases of secondary smallpox which our author has met, occurred in mothers who had been, in early life, inoculated with smallpox virus, and considered as secure against its future influence. Both had the disease severely—one dangerously. The following sentiments from a man of Dr. Clarke's experience deserve record here.

> "These facts justify us in concluding that neither inoculation for smallpox, nor vaccination, afford perfect security; but that vaccination conducted with judgment, protects the human frame against the dangers of smallpox, I entertain no doubt. If the general principle of vaccination affording protection were unsound, it is not *tens* of failures we should now have to record, but *hundreds*." 184.

A report from the Cow-pock Institution closes this paper. It does not differ materially from other reports of similar establishments. It admits the pretty frequent occurrence of *varioloid* disease after vaccination, but contends that, in no case, did it prove fatal.

Art. VII.

Case of a young Woman who has discharged, and continues to discharge from her Stomach a number of Insects, &c. By William Pickells, M.B. one of the Physicians to the Cork Dispensary, &c.

This is a very curious case, and may afford matter of speculation for the "equivocal generation" and "omnia ex ovo" philosophers. The wretched subject of the paper is Mary Riordan, aged 28 years, and who is now weakened by long suffering, but still exhibiting traces of an originally robust form and constitution. She is of highly nervous sensibility, melancholic temperament, and religious frame of mind. Her melancholy mood may be traced to the death of her mother, over whose grave she daily poured the tribute of filial sorrow for months, regardless of the rigour of the season. On one of these occasions, overcome by the poignancy of her feelings and fatigue, she was found the following morning lying over the grave, in a state of insensibility, having spent there the entire of a winter's night.* During the last six years, she has laboured under hæmatemesis, and occasional convulsions. Our author first saw her in July 1819, under fever, for which she was removed to the House of Recovery, Cork. Here she was found to have hepatic affection, accompanied by dropsical swellings and hæmatemesis. Under the latter complaints, she laboured for nearly the next 18 months, when she again came under Dr. Pickells's cognizance. In the above-mentioned interval, she became affected with retention of urine, requiring the use of the catheter ever since. "On some occasions, when the urine was suffered to accumulate, she was relieved from the distention in the hypogastrium by urinous vomiting." This is another fact in favour of one side of the controversy carried on a few years ago, respecting the possibility of urinous vomiting. The patient also laboured under a disease resembling catalepsy, attacking her suddenly, and fixing her limbs in whatever posture they happened to be at the time of seizure. In the intervals of these attacks, she complained of various symptoms, as vertigo, headach, tinnitus aurium, perversion of the senses of sight, taste, and smell. At one time she had complete amaurosis for a fortnight, which appeared to be removed by an ichorous discharge from the ears.

"The hæmatemesis during this period continued to occur more or less frequently, the quantity of blood thrown up varying, on an average, from a pint to a pint and half. She used to complain of a peculiar gnawing pain about the pit of the stomach; and the irritability of the abdomen was at times so great, that the slightest touch, or even the wind of a person passing by her, was sufficient to induce convulsions." 192.

Her appetite was variable, and she frequently vomited up her food. She had been in the daily habit of eating large lumps of chalk, having found it to mitigate the burning sensation in her stomach. Her mouth was constantly parched, and her thirst excessive. An intolerable fœtor issued from her throat—tongue constantly white, and bowels obstinately costive. Catamenia almost gone since the commencement of the discharge of insects; for three years previously to which she had been often at the verge of the grave, and the last rights of the church had been administered to her not less than fourteen or fifteen times.

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* It is well known that the Scotch and Irish exhibit far stronger proofs of filial and parental affection than the English. Much of this difference is attributed, and we think justly so, to the operation of the poor laws, which certainly tend to sever the ties of nature, so strongly knit between parent and progeny throughout the human and every other animal race. Yet we cannot think that the alleged cause is entirely equal to the assigned effect. Allowing that man is the creature of surrounding circumstances, we know that these circumstances, when they have long operated, produce an *hereditary disposition*, which continues to exist long after the causes from which it originally sprung have disappeared. Something of this kind, we imagine, must be taken into account, in aid of the baleful influence of our pauper institutions, and in explanation of the marked difference between the Irish and Scotch peasantry on one side, and the English on the other.—*Rev.*

The discharge of insects commenced on the 3d of April (1822, we believe, for great neglect often takes place in not putting down the year in reports of this kind,) and our author visited the patient almost daily, between that period and the 29th of April, 1823. The first eruption of insects (larvæ) took place after a violent mental emotion, and was immediately preceded by a discharge of blood from mouth, nose, and ears. We cannot attempt to describe the various insects, in all stages of larva, pupa, and perfect animal, minutely detailed by Dr. Pickells, and represented in the plates. The curious must have recourse to the volume itself. But we may observe that Dr. Pickells and other medical gentlemen were frequently witnesses of the ejection of these animals, and there appears no reason whatever to suspect the slightest disposition to imposture on the part of the patient.

> "Of the larvæ of the beetle, *I am sure I considerably underrate* when I say that, independently of above a hundred evacuated *per anum*, not less than *seven hundred* have been thrown up from the stomach at different times since the commencement of my attendance. My own reckoning, during my personal attendance, gives upward of four hundred; but in this calculation is not included the number thrown up during my absence of three months, a period marked by the expulsion from the stomach of such larvæ, almost daily, in some instances, as reported, to the amount of above thirty at a time. A great proportion were destroyed, from an anxiety to evade publicity. Many too escaped immediately after having been vomited, by extricating themselves quickly from the vessel, and running into holes in the floor.*
>
> "Upwards of ninety were submitted to Dr. Thompson's examination, nearly all of which, including two of the specimens of tenebrio molitor, I saw myself thrown up at different times. The average size was about an inch; many, however, which I measured, were an inch and a half in length, and four lines and a half in girth.
>
> "The larvæ of the dipterous insect, though voided only about seven or eight times, according to her account, came up almost literally in myriads. They were alive and moving. None of those have been known to have been discharged within the last seven months.

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* "It may seem ridiculous, but such is the fact, that the females who attended during the operation of an emetic, sometimes carried their apprehensions so far as to secure their petticoats below."

"The larvæ of the beetle were, with few exceptions, lively and vigorous in the extreme; nor was it possible, without a feeling of horror, to view them frisking along the bottom of the vessel in which they were preserved, occasionally expanding their jaws, and extending their denticulated feet, or 'talons,' as their unfortunate victim used to call them. Some, which were apparently dead, revived upon exposure to heat.

"Enclosed in empty pill-boxes several lived upwards of a month. Mr. Clear, of this city, has succeeded in preserving some of the earliest thrown up, still alive, now after an interval of a year, by keeping them in little pots filled with clay, and so secured as not to exclude the air. Some specimens of the larvæ of blaps, which I gave to Mr. Clear, when kept in flour, were observed to be continually running to the surface, as if impatient of their situation, and seemed not to thrive; but when placed in clay quickly buried themselves, and seemed to enjoy their native element." 209.

Dr. Pickells was naturally anxious to ascertain, if possible, the mode of introduction of the insects—or rather of their ova. The patient's answer to one of his questions unfolds a tale which forms a degrading instance of superstition in the nineteenth century.

"When she was about fifteen years of age, it appears that two much respected clergymen of her persuasion having died, she was told by some old women, that if she would drink daily, during a certain period of time, a portion of water imbued with clay, taken from the graves of these clergymen, she would be secured for ever against both disease and sin. She accordingly walked to Kinsale, a distance of twelve miles, where one of the clergymen was interred, and succeeded in bringing away an apron and pocket-handkerchief full of clay from his grave. To this she added, upon her return, a handkerchief and some mugs full of clay, obtained from the grave of the other clergyman, who was buried in this city. Her practice was, to infuse water from time to time according to the exigency, in a vessel containing a proportion of clay so collected, the mixture having been always allowed to rest until the grosser particles of clay fell to the bottom." 212.

The blaps mortisaga is well known to inhabit churchyards and similar situations; but the occurrence above mentioned having happened twelve years prior to the first discharge of the insects, it seems difficult to reconcile with analogy the supposition of their having so long remained in the system. It is not improbable, however, that these insects, in various stages of development, may have been discharged long before the time they were first recognised. It appears indeed that, upon minute inquiry, it was found that, four years prior to the date stated above, the patient had voided *per anum*, in consequence of a purgative, a few of what appear to have been the larvæ of the beetle, since become so familiar to her. To our author it seems more probable that the insects were taken into the mouth, during the night which this infatuated woman passed in the churchyard, about eight years ago.

We have gone farther into the details of this case than we otherwise should have done, from a conviction that the irritation of living animals, (the vermes we mean,) in the primæ viæ, is productive of far more morbid phenomena than is generally supposed. We have seen hydrocephalus, epilepsy, and many grave diseases *irritated* by worms in the bowels, and we believe that many cases of supposed cure of these disorders were only destruction of the parasitic animals that gave origin to phenomena resembling them.

ART. VIII.

Two Cases of Successful Removal of Tumours from the Neck; with Observations. By R. ADAMS, A.B. &c.

These were very formidable operations indeed, and do great credit to the skill and intrepidity of the operator. The first case evinces the practicability of the safe excision of a tumour which projected externally from the side of the face and neck, while it passed inward to the base of the skull, "completely occupying the natural situation of the parotid gland." In the second case the tumour was remarkable for its size and extensive attachments, being larger than the patient's head, who was an aged and debilitated female. The result of this case Mr. A. observes, bears on a subject upon which the opinion of the surgical world is at variance—some questioning the propriety of undertaking any operation where the disease is so extensive, while others, admitting its expediency, think it unsafe to operate without previously securing the common carotid.

> "Reasoning from these cases, I shall endeavour to show that this last is a measure which can contribute but little, if it all to the safety of the operation, while it must considerably diminish the subsequent chances of the patient's recovery." 224.

Case 1. B. C. ætat. 34, a thin delicate woman, came to Dublin with a large tumour, of an oval form, obliquely situated on the left side of the face and neck.

> "From its greatest height, which corresponds to a line drawn from the eyebrow to the summit of the cartilage of the ear, it extends downwards to within two inches of the sternal articulation of the clavicle; anteriorly it reaches to within one inch of the angle of the mouth, and passes posteriorly the mastoid process, corresponding for some extent to the anterior edge of the trapezius. The circumference

of the neck of the tumour amounts to fifteen inches and a half, and the largest part does not exceed this measurement more than one inch; so that the tumour does not hang pendulous on the neck, but firmly stands out at the distance of five inches from the parts which afford it attachment. It is rough and tuberculated on its exterior surface, and of a very firm consistence, preventing the complete opening of the mouth. No part has, apparently, been displaced, except the inferior lobe of the ear, which the tumour in its progress upwards, has carried along with it, so as completely to intercept the entrance of air into the external meatus." 225.

The origin of the disease was traced twenty years back, when a small swelling was perceived under the ear, at first moveable but afterward fixed, and gradually increasing ever since. The pain, which is seldom felt except in spring and autumn, is inconsiderable; but, the deformity rendering her an object of curiosity, she came to the metropolis for the purpose of undergoing an operation.

"Upon closely examining the tumour, I found, it is true, that it appeared somewhat fixed in the situation where it covered the parotid; but that all that portion which lay upon the side of the neck was in some measure moveable, and could be lifted off from the side of the larynx and mastoid muscle; and although it sunk too deep beneath the ear and angle of the jaw to permit the fingers to pass or ascertain its connexions here, and at the same time prevented the complete opening of the mouth, still, on the other hand, deglutition was but little impeded; and on due consideration, and a careful inspection of the fauces, I became convinced that the pharynx was not as yet too deeply concerned; I felt no hesitation therefore in recommending her to submit to the immediate removal of the disease, to which she gladly assented.

"May 16th, 1818. With the assistance of Messrs. Colles, Wilmot, Duggan, Cusack, Harrison, and in the presence of other friends, I proceeded this morning to the excision of the disease in the following manner; the patient placed horizontally on a table, her head properly disposed to the light, I commenced by making two incisions, extending from the highest to the lowest part of the tumour, comprehending between these an elliptical portion of skin left attached to its surface. I next dissected the skin from its anterior part, turned it towards the cheek, and separated the cyst to some depth.

"Difficulties now occurring in the removal of the tumour, where it passed behind the ascending ramus of the jaw, we endeavoured to raise it from behind, and but partially succeeded, until by firmly grasping and pulling it out from the neck, we had cut those parts of the capsule which, connecting it to the subjacent parts, felt most resisting. Having raised it from below upwards, it remained to detach it from the parotid space, into which we found it, as it were, firmly impacted; by the cautious use, however, of the knife, the cutting edge of which was always presented toward the tumour, and by the exertion of some force, the whole suddenly came away. Lastly some portions of remaining capsule, together with the anterior part of the parotid gland, somewhat altered from its natural appearance, were dissected from the masseter muscle. Numerous wounded arteries poured out their blood, but were quickly stopped by the fingers, and tied after the operation. As the parotid duct did not present itself, it must either have been pushed from its usual situation, or have degenerated from its natural appearance, of which the latter appears to me the more probable." 227.

The patient bore this formidable operation with great steadiness. It was found that the tumour had reposed on the side of the larynx, and in great part on the sterno-mastoid muscle. Above and in front, the whole of the masseter muscle was dissected clean, and behind it the ramus of the jaw, and anterior edge of the mastoid muscle was, for some extent, exposed. Between the last-mentioned parts the tumour had buried itself into a deep cavity, bounded behind by the mastoid process, before, by the back part of the articulation of the jaw and pterygoid muscle—above, by the meatus auditorius and the ear, to the root of the styloid process. In short, the space was entirely disclosed which is naturally occupied by the parotid gland, "not a vestige of which was to be seen." The weight of the tumour when removed was one pound six ounces. It exhibited a cellular structure, firm in general, but soft in some places. The whole was surrounded by an adherent capsule, which sent projections between its numerous lobes to be connected with small cysts. In its yellow colour and consistence the interior of the tumour seemed to approach to the state of carcinoma, but it wanted that fibro-cartilaginous texture which many think essential to the morbid structure. She had strong symptomatic fever on the fourth day. But by the fourteenth day she was able to walk out, and in six weeks the wound was completely healed. It is now five years since the operation, and the patient remains in perfect health.

Our author has made some surgical reflections on the above case which will be read with interest by the operator. We can only glance at a few of the topics discussed. We all know the violent disputes that have existed among surgeons, respecting the propriety or possibility of extirpating the parotid gland. This case, Mr. Adams observes, may be probably quoted both for and against such an operation. So imposing were the appearances here, that some of those present felt satisfied that the gland was actually dissected out from its deep cavity. Our author himself would have come to the same conclusion had he not been prepared for a closer examination of the subject by the doubts so strongly expressed upon the possibility of such an operation.

"Upon a little reflection I became convinced that this was one of those cases of simple encysted tumours, which, dating its commencement from some imperfectly resolved lymphatic gland developed over the parotid, had, by increasing size and pressure, effected the absorption of all that portion of the salivary gland which lay beneath it; indeed, so complete was the obliteration of this organ, that the only part of the true glandular structure which the most careful examination could recognise, was that small portion which, lying over the masseter muscle, was not covered nor compressed by the tumour." 232.

Our author is aware that this case may be looked upon in quite a different light by others, and considered available to prove that there is nothing in the relative position of this gland that should deter us from its excision. As the portio dura of the seventh pair was divided with impunity, while those vessels which were not obliterated by the pressure of the tumour were secured with little difficulty, so the internal jugular vein and carotid artery were clearly exposed and easily avoided.

"But it will require but little reflection to satisfy us that the removal of an *encysted* tumour from the neck, no matter what be its relations, can never be complicated with the difficulties naturally to be encountered in extirpating the *diseased* parotid gland; nor can the relation of such cases by any means convince us of the prudence of undertaking such an operation. Such observations may be stretched so far as to show that there is nothing in the mere locality of the *healthy* parotid which should absolutely forbid all efforts to extirpate it; but if for a moment we consider the true schirrhous state of this gland, which surgical anatomists have in view when they protest against the propriety of making any attempts to remove it, in which a carcinomatous action is supposed to have commenced in its substance, determined its enlargement, and constituted a firm, inelastic swelling, which even in its commencement, never had been moveable, we must, I am persuaded, coincide with those authors who are against all surgical interference in such circumstances. Nor will we, I imagine, if we consult the history of such a disease, have reason to question the prudence of this resolution, as we are informed that such affections are observed to remain stationary for years, while our experience in almost all our operations for the removal of cancerous disease will induce us to place but little confidence in their efficacy." 234.

Our author finally observes that, while on the one hand he has endeavoured to show that any attempt to extirpate the *diseased* parotid gland is, on every ground, objectionable, yet on the other, he would wish to represent the absolute necessity of removing those encysted tumours occasionally found occupying the parotid region. It is to be regretted, however, that there is, too often, much difficulty in distinguishing between these cases—and therefore the judgment of the surgeon must always decide according to the circumstances of the individual case.

Case. 2. Bridget Daly, 68 years of age, has been for some years incapable of making any effort to support herself, being afflicted with a growing tumour, which now covers almost the entire of her neck, overhanging the chest, and its weight requiring constant attention. The disease commenced 30 years ago, beneath the angle of the jaw, as a small hard tumour, remaining stationary for the first few years, then gradually, though very slowly, increasing.

" The size which the tumour has at length acquired is very considerable, the highest part of it is situated beneath the right ear, the cartilage of which it has pushed upwards; from this its attachment extends obliquely forward over the ramus and angle of the lower jaw for two inches beyond the chin to its *left* side; posteriorly it passes the mastoid process, and descends towards the top of the shoulder on the border of the trapezius for two-thirds of its extent; there leaving the muscles, the line circumscribing the inferior part of the neck of the tumour passes downwards in a simi-circular direction over the sternal articulation of the left clavicle, which it touches, to the edge of the mastoid muscle of the opposite side, and then ascends to the lower jaw, along the left side of the larynx. This circumference of the neck of the tumour measures *twenty-four inches*, and comprehends every part of importance in the cervical region; above, the tumour does not merely overlap the lower jaw, but seems to come as it were from behind and within this bone from the space above the os hyoides and floor of the mouth; from which, descending to the clavicle, it covers the whole of the anterior part of the neck, completely overlapping the larynx and trachea, which have been carried by the tumour to the left side. From this, its smallest part, although the most important for our consideration, the tumour is projected forward, and at the same time across the neck, increasing so much in size, as in the anterior view it conceals the entire of the neck and clavicle, overhanging the shoulder and thorax to the third rib, upon which, however, except when the head is bowed, it does not rest, a circumstance which, when its great weight is taken into consideration, indicates some firm and bony attachment above; it is of a stony hardness, with many irregular eminences on its surface." 240.

Much doubt was entertained respecting the propriety of an operation under such circumstances. But as it was clear that, if some active means were not employed the patient must soon die, her difficulty of breathing and oppression being such that, whenever she walked her lips became livid and she was threatened with suffocation, it was determined to give this poor woman a chance for her life.

Operation. " Dec. 28, 1819. The patient placed on a table, with the same experienced assistants to whom I was indebted for aid on the former occasion, and many of my younger friends, I proceeded this morning to remove the disease in the following manner; commencing by an incision from the ear across the chin down to the cyst of the tumour, which was instantly followed by a profuse bleeding, and before we could proceed farther, it became necessary to tie many vessels; I then continued the dissection in the same line, endeavouring to detach the tumour from the surfaces of the lower jaw, to which, as I anticipated, I found it very firmly attached, and from this neighbourhood it derived its chief supply of blood. Nothing, indeed, could be more unpromising than this stage of the operation; every new incision was followed by a gush of blood, which would not permit us to proceed until the vessels were secured, among which the external maxillary, or facial, bled most profusely; but after some firm connecting bands, which held up the tumour, were felt, and carefully divided, it dropped a little from beneath the ear and the jaw, and the arteries which were not tied ceased to bleed. It was now time to detach it below from the neck, which was more easily accomplished, after making a circular incision, and raising up with one hand the tumour from the neck, we met with but little difficulty until we arrived at that point where it lay upon the sterno-mastoid; here the tumour was so firmly attached, that it was impossible to dissect it from the muscle, which it therefore became necessary *to split from below upward*, to disengage the diseased mass. It now only remained to detach it from its deepest connexions beneath the ear and lower jaw. As there were no very firm bands to be divided here, I abstained further from using the edge of the knife; but sometimes with its handle, and sometimes with the fingers, but chiefly by twisting it, it at length yielded, and came away entire. As soon as the patient recovered from the faint into which she fell immediately after the operation, many small vessels were secured, and the wound as quickly as possible closed: it was necessary to unite several points of skin by suture. The poor woman bore this painful operation with much fortitude, only occasionally complaining when the larynx was disturbed by the displacing of the tumour. In the evening there was slight hæmorrhage, which was stopped by pressure, without opening the wound." 244.

Nothing particular occurred till the fifth day, except a gradual acceleration of pulse and increased heat, but not more than might be expected. On the sixth day there was a remarkable depres- of strength, headach, nausea, quick small pulse, palpitation, slight delirium. On the seventh day she was so ill as to be reported as moribund. Calomel, opium, and digitalis were prescribed. The mouth became quickly affected with the mercury —the pulse fell—the tongue cleaned. "From this time her recovery was slow, and without interruption gradually progressive." 245.

The weight of the tumour when removed was 5 lbs. 7 oz. and although there were numerous vessels spread over its surface, a section of it exhibited no vascularity. Towards its large extremity was a cavity containing nearly a pint of an albumious fluid. In this fluid and in the cancerous organization of the morbid mass, our author was concerned to perceive a melancholy promise of return of disease—which time has with too much truth realized. But, upon the whole, our author thinks that this poor woman has been amply repaid for her courage in submitting to the operation, by a three years' comparative state of comfort—her respiration having been rendered free, and her life having been undoubtedly prolonged. He cannot doubt, that if an earlier operation had been proposed and executed, before a cancerous action had seized upon the tumour, the result would have been as fortunate as in the preceding case.

From attentive consideration our author is convinced that the operation, however modified, of tying or throwing a ligature round the common carotid, should never be made a preparatory step to the excision of a tumour from the neck. It increases the quantum of symptomatic fever afterward.

> "But it is not merely that I object to the practice as likely to entail a dangerous consequence on the operation, which it has been supposed to render more secure for the moment, but I feel much disposed to question the utility, as well as prudence, of the proceeding, as I am of opinion it cannot prevent, and greatly doubt it can even moderate the hæmorrhage; an advantage which can, at all events, as well be derived from temporary compression of the exposed vessel, without so much endangering the life of the patient, by exposing him to the double peril of fever resulting from an extensive wound, and that necessarily succeeding the ligature of a large arterial trunk." 251.

Our author feels persuaded that the external carotid can, in most cases, be secured before the anterior part of the tumour is detached, or the great maxillary artery opened; and the *internal* carotid can alone be endangered when the knife passes to the pharyngeal side of the styloid process, where the tumour is not likely to pass, and where it would not be safe to follow it, even were the common carotid secured, as the jugular vein and important nerves would be interfered with. These are the reasons which induce our author to think that, in such operations, it is always better to keep ourselves prepared for difficulties which possibly may occur, than, by adopting any strong measure, endeavour to ancicipate those which probably shall never present themselves.

We must defer our analysis of the remaining articles in this volume till next quarter.

VIII.

PHLEGMATIA DOLENS.

1. *An Essay on the Proximate Cause of Plegmatia Dolens.* By David D. Davis, M.D.

[Medico-Chirurgical Trans. Vol. XII. Part II.]

2. *Observations on Phlegmatia Dolens.* By John W. Francis, M.D. of New-York.

[New-York Med. and Phys. Journal, No. 1.]

3. *Observations on Cruritis, or Phlegmatia Dolens.* By David Hosack, M.D. of New York. *Ibidem.*

> "Multùm prodesse ad intelligendas morborum causas cadaverum sectionem nemo dubitat:—interim tamen magnâ cautelâ hìc opus est, ne pro morbi causa habeatur illud, quod potius morbi effectus est: multa enim in cadavere inveniuntur mutata per morbum ipsum, quæ non præexstiterant ante morbum."—*Van Swieten's Commentaries on Boerhaave's Lectures, Sect.* 1041.

We recommend to the serious consideration of every pathologist the admirable and memorable remark of Van Swieten, prefixed as a motto to our present article. We are convinced that there is not a more common mistake in pathological researches than that of setting down effects as causes. In the theories of fevers, broached and maintained in various countries, how often have the traces of inflammation found after death been pronounced the cause and not the consequence of the pyrexial phenomena?—has not the watery effusion in hydrocephalus acutus been set down as the primary state of the head, instead of the mere consequences of inflammatory action in the vessels of the brain?—These examples might be multiplied to a great extent. The perusal of Dr. Davis's paper has induced us to think that, founded as his theory is upon facts and dissections, apparently the most accurate and authentic, yet that he may have fallen into the same error as many of his illustrious predecessors. But this is prejudging the question. He shall speak for himself.

Up to Dr. Davis's time, four different theories of phlegmatia dolens have been maintained, with more or less plausibility, and grounded on some of the obvious phenomena of the disease. Mauriceau's Hypothesis was *Metastasis of the Lochia*—Puzos attributed the disease to a *translation or a depot of milk*, which has maintained considerable credit in the continental schools. Mr. White and others espoused the doctrine of *obstruction or disease of the lymphatics*—while Dr. Hull, of Manchester, in his Essay on Phlegmatia Dolens, maintains that "*the prox-*

imate cause consists in an inflammatory affection producing suddenly a considerable effusion of serum and coagulable lymph from the exhalents into the cellular membrane of the limb." The seat of the disease he believes to be in the muscles, cellular membrane, and inferior surface of the cutis. "In some, cases, he observes, the inflammation may be communicated to the large blood-vessels, nerves, the lymphatic glands, and glands imbedded in them." From these passages it is evident that Dr. Hull has left only the *bones* as new or unoccupied ground for future investigators. But then the question of *priority* of structure invaded by the disease is still open for discussion, and this is the field pitched upon by Dr. Davis. Dr. D. keenly enough remarks that this "capacious theory" of Dr. Hull is not attempted to be founded on any evidence derived from anatomical examination—and here, it must be confessed, is an insurmountable defect—a defect from which Dr. Davis's own theory will not, perhaps, be found quite free, as we shall show in the sequel. As an excuse for Dr. Hull, it is conceded that no *post mortem* evidence existed at the time he published—if we except a case recorded by Gottfrey Zinn, in the year 1753, to be found in the second volume of the Commentaries of the Royal Society of Gottingen. This case is alluded to by Dr. Hull, but he is unwilling to consider it as a genuine example of phlegmatia dolens. Dr. Davis has no scruple of this kind—nor indeed have we—but the Doctor certainly turns it to account in a manner rather too *forensic*. As the case itself, and Dr. Davis's commentary on it are short, we shall lay them before our readers.

"AN ŒDEMATOUS FOOT, FROM A COMPRESSURE OF THE CRURAL VEIN."

"'A woman, nearly thirty years of age, after a difficult labour, and in consequence of careless conduct, suffered much disturbance of her lochia. Her right leg was seized with an œdematous swelling, which extended from the groin to the heel, and enlarged the right labium pudendi. At the same time she was also seized with a loss of appetite.

"'Every probable means afforded by the art of healing was tried to remove the swelling, but without success. Neither diaphoretics, nor purgatives, nor diuretics, gave any relief; and fomentations and frictions excited the most violent pain. An incision was made through the cutis of the thigh, that the water might be drained off by an issue; but only a few small drops were discharged by it. The serum, in the cellular membrane, assumed in some sort the nature of a tremulous gelatine; all the more fluid part of it being resorbed. At the end of two months the patient died asthmatic.

"'On dissecting the body, we found some of the inguinal glands scirrhous, greatly enlarged, and surrounding the crural vein, by which its diameter was very much diminished.'"

DR. DAVIS'S COMMENT.

"In an analysis of this dissection, it is important to distinguish between the facts that are reported, and the opinion of the writer as to the order of their relation to each other as cause and effect. The simple facts of the case are enlargement and induration of the inguinal glands, and a great diminution of diameter of the crural vein. That this diminution of diameter in the vein was the effect of the compression presumed to have been made upon it by the enlarged and indurated glands, is to be received as a matter *purely of opinion*. In admitting, therefore, the fact of a diminution of diameter in the vein, we are by no means bound by the author's opinion as to the cause. On the contrary, it is my firm belief, that the actual cause of the asserted diminution of capacity in the vein, was the effect of a primary disease of the vessel itself; and that the inguinal glands had become enlarged and indurated in consequence of their immediate vicinity to the original seat of disease in the crural vein." 425.

Now we appeal to the impartial, whether Dr. Davis is justified in reversing the conclusions drawn by Zinn? To us it appears infinitely more probable that a cluster of enlarged and indurated glands in the groin should make pressure upon, and diminish the calibre of the crural vein, than that a narrowing of the vein should enlarge and indurate the inguinal glands. That a special pleader at the bar should endeavour to give this version of the affair, for the good of his client, might not be wondered at, but we certainly think a pathologist weakens, rather than strengthens his cause by evidence and reasoning of the above description.

Dr. Davis now proceeds to the facts which have come under his own observation and that of a friend, Mr. Oldknow of Nottingham, premising that it is his object to prove that

"The proximate cause of the disease called phlegmatia dolens, is a violent inflammation of one or more of the principal veins within and in the immediate neighbourhood of the pelvis, producing an increased thickness of their coats, the formation of false membranes on their internal surface, a gradual coagulation of their contents, and occasionally a destructive suppuration of their whole texture; in consequence of which, the diameters of the cavities of these important vessels become so greatly diminished, sometimes so totally obstructed as to be rendered mechanically incompetent to carry forward into their corresponding trunks the venous blood brought to them by their inferior contributory branches." 426.

Such is our author's theory of the proximate cause of phlegmatia dolens, and he next proceeds to adduce the proofs.

Case 1. Caroline Dunn, aged 21 years, of weakly constitution, was delivered of a male child on the 7th February 1817, after a severe and protracted labour. On the following day there was soreness in the vagina, and some fever, which continued during the next six or seven days. On the 13th she had still fever, with inflamed, swelled, and œdematous labia pudendi, copious yellow discharge from the vagina, &c. She got better, however, and on the 22d was able to sit up.

"'26th. Worse: left leg and thigh much swollen; pain in the inguinal region, skin hot, no signs externally of inflammation, no pitting on pressure, bowels costive, slight cough, respiration difficult, pulse very quick and small, headach.

"'Feb. 28th to March 2d. No better:—leg pitted on pressure, countenance depressed, languor, giddiness at intervals, pulse 80, freedom from pain, no appetite, bowels twice relieved.

"'3d. Total insensibility:—limb equally swollen, countenance pale, sunk and emaciated.

"'4th. Died at noon this day.'" 428.

The body was examined by Mr. Lawrence, which is a sufficient guarantee for the correctness of the dissection.

The left lower extremity presented a uniform œdematous enlargement, without any external discoloration, from the hip to the foot. "This," says Mr. Lawrence, "was found to proceed from the *ordinary anasarcous effusion into the eellular substance.*" The inguinal glands were a little enlarged. "The femoral vein, from the ham upwards, the external iliac, and the common iliac veins, as far as the junction of the latter, with the corresponding trunk of the right side, were distended, and firmly plugged with, what appeared externally, a coagulum of blood. The femoral portion of the vein, slightly thickened in its coats, and of a deep red colour, was filled with a firm bloody coagulum, closely adhering to the sides of the tube, so that it could not be drawn out. The trunk of the profunda was distended in the same way as that of the femoral vein; but the saphena and its branches were empty and healthy."

"The substance filling the external iliac and common iliac portions of the vein was like the laminated coagulum of an aneurismal sac, at least, with a very slight mixture of red particles. The tube was completely obstructed by this matter, more intimately connected to its surface than in the femoral vein; adhering, indeed, as firmly as the coagulum does to any part of an old aneurismal sac. But, in its centre, there was a cavity containing about a tea-spoonful of a thick fluid of the consistence of pus, of a light brownish red tint, and pultaceous appearance." 430.

Mr. Lawrence had no hesitation, of course, in pronouncing the above appearances to be the products of inflammation.

Before proceeding to the next case, we take the liberty of differing from Dr. Davis, on the identity of the case described with that of real phlegmatia dolens. We ground our first doubt on the *fatal issue* of the case, which is contrary to the general experience of the profession hitherto; for it must be recollected that Zinn's patient died of asthma, and not of phlegmatia dolens. If then there are very few cases on record where phlegmatia dolens in itself proved fatal; we have, at least, grounds for supposing, (we do not say that it amounts to proof) either that Dr. Davis's case was *not* phlegmatia dolens, or that its proximate cause was different from the proximate causé of phlegmatia dolens in general.*

Our main doubt, however, is grounded on the anatomical, or rather, pathological difference between Dr. Davis's case and those described by other authors. We have Mr. Lawrence's authority that the *enlargement* of the limb proceeded from *ordinary anasarcous effusion* into the cellular substance. Does this state harmonize with the description of phlegmatia dolens, as given by authors, or as seen by practitioners? It is contradistinguished from *anasarcous infiltration* in all the writers we have perused—(and certainly by our own observation, in at least four or five cases) by the tense, or hard, or at all events, *elastic* swelling of the limb—*not pitting* on pressure. What is Callisen's definition? "Tumor *elasticus*, albescens, renitens, calidus, dolens, foveam impressi digiti *haud retinens*." It is characterized by Dr. Dickson, of Plymouth Hospital, who has paid great attention to the subject, and who has written an excellent paper on the disease, as an "*unyielding*, white, glossy, swelling"—"incompressible," while "little subcutaneous knobs or prominences are often perceived on drawing the hand over its surface."

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* Is it likely that so serious, and generally fatal a disease as is inflammation of the internal coats of veins, under other circumstances should be almost invariably devoid of danger in phlegmatia dolens?

And here we shall introduce, from the 41st volume of the Dict. des Sciences Medicales, a case which shows that *inflammation of the crural veins* has long ago been described after parturition, but without naming the disease phlegmatia dolens.

Sect. vi. *Inflammation des Veines à la Suite des Couches et de l' Avertement.* Meckel a publié, dans une Dissertation de Sasse, *Plusieurs faits d' Inflammation des Veines Crurales à la Suite des Couches.* Voici une observation que Schwilgué lui a emprunté. "Peu de temps s'etait ecoulé depuis la delivrance d'une femme, quand elle éprouva de la fièvre, des tiraillemens douloureux dans l'abdomen et dans le bassin, qui disparurent; mais au bout d'environ trois semaines, il survient une fièvre erratique, de l'expectoration, une douleur dans la region du foie, ainsi que dans la hanche guache, et une douleur intolerable dans la cuisse du même cotè. A l'examen du cadavre, on trouva la cavité abdominale remplie d'une matière purulente, le foie tresvolumineux, et les poumons sains. *Les vaisseaux cruraux etaient, ainsi que les nerves du même nom, entourés d'une matière puriforme; la veine crurale, examinée depuis son origine jusqu'au genou avait l'epaisseur et la consistance de l'artere;* ELLE ETAIT REMPLIE DE PUS ET DE SANG, *tandis que l'artere ne contenait que ce dernier liquide.* Les parois de la veine criaient sous le ciseaux; sa membrane interne etait plus spongieuse que dans l'etat ordinaire, et recouverte d'une fausse membrane très-distincte qui s'en laissait separer par lambeaux. Ses valvules etaient en partie corrodées, dechirées, et en partie epaissies, tumefiées et de couleur foucée." [*Schwilgué Memoire, cité p.* 19.]

In the above case, we have as complete a case of inflammation of the crural vein, as can possibly be cited; but the phenomena by no means correspond with those noted in phlegmatia dolens, with the mere exception of intense pain in the thigh.

In a very well constructed paper on phlegmatia dolens by the late Dr. Bateman, inserted in Rees's Cyclopædia, and purporting, of course, to be drawn from the best authors, as well as personal observation, we have the following pointed expressions:—"the swelling is general and equal over the whole limb—it is much harder and firmer than in anasarca, in every stage of the disorder—it is not so cold, in any state of the disease, as the dropsical swelling; neither does it *pit* when pressed upon by the finger—nor does any water issue from it when it is punctured by the lancet." When these descriptions are compared and contrasted with Mr. Lawrence's dissection, we think every unprejudiced mind will agree with us, that Dr. Davis's case was of a character wholly different from genuine phlegmatia dolens. A case is also recorded by Dr. Denmark, of a disease resembling phlegmatia dolens, in a male; and his dissection of the case shows a disease, "the characteristics of which are strikingly different from those of œdema."

The second and third cases brought forward by Dr. Davis are very imperfect and unsatisfactory. But we shall give a fair epitome of them.

Case 2. A lady of sanguineous, irritable temperament, died suddenly in the midst of apparently high and perfect health," on the 20th September, 1819, six weeks after confinement. She had been seized with peritoneal inflammation the day after delivery, which yielded to active depletion. Ten days after this she made complaint of deep seated pain in the groin, and along the great vessels. Dr. D. found the limb swelled, and very painful; but, by leeches and blisters, "this new inflammation was speedily reduced," and, in a week, the "swelling had entirely subsided," the patient having recovered the perfect use of the limb. From this period she convalesced rapidly, and satisfactorily, dying, as before stated, in the midst of apparent health.

We apprehend that very few, on reading the above case abstractedly, would think of connecting it with phlegmatia dolens. *Dissection.* In the thorax all was apparently sound. In the abdomen, there were adhesions between the viscera and the parietes, the consequence of previous inflammation. All the abdominal viscera themselves were healthy. Mr. Anderson and Mr. J. C. Taunton undertook the examination of the iliac veins.

"It is to them that I am indebted for the preparation, No. 2. It forms a part of the left external iliac vein, including about half an inch, of the upper portion of its corresponding femoral vein. That vessel was found strongly attached by adhesions of its cellular coat to the parts forming its natural bed. Its parietes still retained a morbid thickness, and its internal tunic was studded in several places with deposites of adherent lymph. The portion most remarkable for this incrustation, and otherwise most diseased, was the part of the vein immediately under Poupart's ligament. The appearance of that part is yet well preserved in the preparation, and forms the rough scabrous inferior portion of it. The tube of the vessel was still manifestly pervious, though it had suffered a diminution of capacity, amounting to, perhaps, one half of its natural diameter. The inguinal glands were not diseased." 435.

Of this case we can only say—valeat quantum valere debet.

Case 3. This case was communicated by Mr. Oldknow, of Nottingham. A woman was delivered in an easy and natural manner, in the month of September, 1820. She did well for about three weeks. She was then seized with a violent diarrhœa, for which astringents were administered. Fever continued. On the 30th day from delivery, the purging returned, and "the left lower extremity became swollen and painful, with considerable increase of fever." Four days afterward, she died.

Dissection. "'On examining the swollen limb the day after her death, I found the femoral vein, one third down the thigh, and all the iliac veins much enlarged, and containing adherent layers of coagulated blood, similar to that found in aneurismal sacs, together with a sort of grumous fluid of a brown colour, more or less mixed with air, and almost obliterating the venous canal. The same appearances, but in a much less degree, extended along the cava as far as the entrance of the renal veins. The coats of the veins were highly inflamed, and intimately attached to the surrounding parts. The absorbent vessels and glands were slightly enlarged as high as the lumbar regions, but not otherwise affected. The uterus had regained nearly its natural size.'" 436.

In the above, it will be seen that all the proof, during life, of phlegmatia dolens, "*is a swollen and painful lower extremity*"—and, in the dissection, not a word is said about the general state of the thigh and leg. The inflamed and obstructed vessels occupy the whole of the description. The patient died too on the *fourth day of the phlegmatia dolens.* Whether this case may be satisfactory to our readers we know not. To us, it conveys nothing decisive as to the pathology of phlegmatia dolens.

Case 4. A lady of delicate constitution and very irrritable habit, was delivered on the 2d July, 1821. She did well till the 7th day, when, being placed, apparently, in a current of air, she was seized with a violent rigor, and when reaction came on she was affected with intense pain in the left side of the chest. By decisive measures the pain in the chest was nearly subdued; but the fever continued. "In the evening of the same day, unequivocal symptoms of phlegmatia dolens declared themselves." This was on the 9th July. She died on the 23d of the same month.

On dissection, there was effusion and inflammation in the chest. "The left lower extremity, from the hip to the toe, was considerably but not greatly enlarged, and there was an evident fulness of the labium pudendi." The iliac veins on both sides were unusually turgid with blood. When the left was opened, it was found to contain a firm coagulum of blood, not adherent to the vessel at that place. Higher up, however, in the common iliac portion, the coagulum was adherent to the internal surface of the vessel. The left *internal* iliac was greatly inflamed, and its diameter so much contracted as to be almost impervious.

In the above case we have to regret that nothing is said of the state of the limb from the 9th July, when the "unequivocal symptoms" of phlegmatia dolens commenced, till the patient's death. In the dissection again, nothing is stated of the pathological condition of the limb. The whole attention is concentrated on the vessels. Now it ought to have been Dr. Davis's chief and main object to prove, in all these cases, that the disease was really phlegmatia dolens, by an accurate description of the symptoms and state of the limb, and then, to have traced the *cause,* if he could. But it is evident that the first and main object is almost totally neglected—or where it is adverted to, as in Mr. Lawrence's dissection, it makes against the question—and therefore we do not consider ourselves bound to subscribe to our author's etiology, without having the necessary documents respecting the symptoms and dissections of the cases.

That the inflammations and obstructions of vessels brought forward by Dr. Davis, would and did produce the tumefactions of the limbs, we entertain no doubt—but until Dr. Davis lays before the public a more circumstantial detail, we hesitate to acknowledge the cases in question to be genuine examples of phlegmatia dolens. We have, however, placed the *facts* before our readers—and they can judge for themselves, uninfluenced by our opinions on the subject. The author of the paper we have the pleasure of enrolling among our friends, and we know him to be an able teacher and an excellent practitioner. But we know, also, that when a theory is to be established, *the brighter the genius the proner to error.*

Before adverting to the treatment of phlegmatia dolens, we shall give some account of the other papers whose titles stand at the head of this article.

Dr. Francis, of New-York, has published an interesting *memoir* on this disease—many instances of which appear to have come under his notice both in females and males.

He considers the disease as varying in its causes and also its seat—not being confined to the lower extremities alone—nor to the female sex, nor to the period of parturition. In a case communicated to Dr. Francis, by Professor Macneven, the same individual was afflicted four different times, in four successive labours, "in the same limb," and "was characterized by all the diagnostic signs of the disease." He mentions a case in which Dr. Mann of Boston was consulted, and where, previous to his visit, the limb had been punctured, under the idea of a fluid being collected there. No discharge followed—the wound sphacelated, and the patient died. We shall give the following curious case of the disease in a male, when in the upper extremity.

"Dr. Heermans, of Ontario county, state of New-York, in a letter to Dr. J. B. Beck of this city, has detailed the history of a case of phlegmatia dolens in a young man aged nineteen; and so far as a single instance can be brought to militate against a general rule, it furnishes conclusive evidence that the superior as well as inferior extremities may become the seat of this disease. The patient was subject to rheumatic affections, and had been exposed to inclement and rainy weather some days before his illness. The symptoms of the disorder first exhibited themselves in the calf of one leg, and rapidly extended to the groin, with increase of pain and inability to move. His sufferings were so acute that he was unable to bear the slightest pressure or contact with the skin. At the lapse of thirty-six hours the limb was enormously distended, and had acquired the glabrous aspect and other pathognomonic symptoms of this striking affection. A similar swelling soon commenced in the other extremity; it began at the groin and descended in this leg as rapidly as it had ascended in the other, with the same sensation and appearances. The swelling now continued in both legs down to the extremities of the toes. On the fourth or fifth day, according to Dr. Heermans, the patient complained of the same kind of pain and swelling of the parts about one of the shoulders; but it did not diffuse itself with the same violence and rapidity as it had done in the lower extremities; in like manner the other superior extremity was assailed; after ten days from the first attack, the swelling and distress began to subside in the order in which they commenced: with the exception of the left arm, which continued distended seven or eight weeks before it was reduced to its natural size. The disease was treated by active depleting remedies, frictions, and fomentations." 9.

In the 2d Number of the same Journal, there is a case by Dr. Beck, where phlegmatia dolens occurred in a woman 52 years of age. "The limb was tense,—shining, elastic, and exceedingly painful. No œdema was discoverable in any part of it." The patient informed Dr. Beck, that the disease had commenced with a feeling of deadness in the toes, heel, and upper part of the foot, which was shortly succeeded by severe pains in the part, after which the foot began to swell. "By the succeeding day the swelling had ascended to the knee, from which it gradually proceeded to the groin." The complaint yielded to depletion.

Dr. David Hosack has also seen a considerable number of cases of phlegmatia dolens, and relates nine cases in the Journal from which we are now quoting. We cannot stop to extract any of the details—except the notice of one case, which our author states to have first given him an enlarged view of the pathology of the disease. The lady had undergone a severe labour with twins, and had been confined 23 days, when

> "She was first affected by cold, producing catarrhal and pneumonic inflammation; but within forty-eight hours a metastasis took place in the limb, which proceeded to swell with all the symptoms of idiopathic cruritus, the affection of the lungs totally disappearing. By general blood-letting, saline cathartics, antimonials, tepid applications to the part affected, with a strict antiphlogistic diet and regimen, the first stage of the disease was in a few days removed; afterward, by stimulating liniments, frictions, and the roller, the parts affected were restored." 54.

We shall give Professor Hosack's general conclusions drawn from a careful revision of the cases that came under his notice.

> "1st. That cruritis is an inflammatory disease, not only affecting the limb, but the whole system.
>
> 2d. That it most usually proceeds from a suppression of the natural excretions, the effect of cold, stimulating drinks, and other means of excitement.
>
> "3d. That it is not necessarily connected with the lochial discharge, as inculcated by Trye, Denman, and indeed by Rodrigus Decastro, of

Hamburgh, in 1603, by Wiseman, 1676, and by Mauriceau, in 1712, who were the authors of this doctrine.

"4th. That the first irritations frequently appear about the calf of the leg, and not in the groin and pelvis, as asserted by Dr. Denman.

"5th. That it follows easy as well as difficult labours, and therefore cannot proceed from the pressure of the child's head upon the edge of the pelvis rupturing the lymphatics, as supposed by Mr. White.

"6th. That it is not a disease confined to the lymphatics, but as in the cases recorded by Dr. Hull, it appears in every part of the affected limb.

"7th. That it is not confined to females, but, as in the cases recorded by Dr. Hull, Dr. Ferriar, Dr. Thomas, and others, it occasionally appears in males.*

"8th. That, as in gout and rheumatism, when depletion is not actively employed, the inflammation, after appearing in one limb, is in some cases transferred to another.

"9th. That it sometimes appears in both limbs at the same time.

"10th. That the general means of subduing inflammatory action are the most effectual in removing the *active* stage of this complaint.

"11th. That in the second stage of cruritis, in addition to the use of general stimuli and tonics, stimulating spirituous liniments, friction, and the roller are most useful in restoring the circulation, and in exciting the absorbents in the removal of the swelling which remains in the passive stage of this disease.

"12th. That occasionally, as in the cases related by Hull, Denman, and by Zinn, it ends in abscess, and proves fatal, especially where the antiphlogistic treatment has not been vigorously pursued in the first stage of the disease, or when it occurs under great exhaustion and debility of constitution." 57.

After all that has been written on the pathology of phlegmatia dolens, and from what we have seen of it ourselves, we are more inclined to adopt the opinion of Dr. Hull than that of any other writer—namely, that it consists of a peculiar inflammation seated in the muscles, cellular membrane, and inferior surface of the skin, producing a rapid effusion of coagulable lymph from the exhalents into the cellular membrane of the limb. The obstructions or other organic changes which have been, or may be, found in the veins or lymphatics, we consider as secondary effects or contingencies; and cannot view them as the primary causes of the disease.

This naturally leads to the treatment. Dr. Davis condemns general bleeding, although the constitutional pyrexia might seem to demand or authorize that measure. Experience, the

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"* See Medical and Chirurgical Journal for 1817. Medical and Chirurgical Transactions for 1819."

best test of theory, has shown him the inefficiency of venesection in phlegmatia dolens. Puzos was a strenuous advocate for general bleeding; but the practitioners of this country, who have written on the disease, have generally contented themselves with local bleeding, and moderate antiphlogistic regimen, in the early or inflammatory stage of the complaint. There can be no doubt, however, that cases may occur, where general depletion may be rendered necessary, by the extent of the general fever; and, therefore, venesection should not be totally proscribed from the methodus medendi.

> "I am happy," says Dr. Davis, "to have it in my power to assure the Society, that the great indication of treatment in this disease, as already proposed; viz. the speedy resolution of the inflammation in the iliac veins, is to be secured in almost every case (I have not seen an exception) by early and decisive local treatment. The blood to be abstracted should, accordingly, be all taken from the immediate neighbourhood of the part primarily affected. From the excessive tenderness of the parts concerned, leeches are the only operators to be depended upon in these cases. Of these, a dozen, or a dozen and a half, should be forthwith applied to the groin, to the affected iliac region, and to the interior and superior part of the thigh. If this be done before any very obvious accumulation of blood in the limb shall have taken place, it will generally put down the threatened mischief at once. In the event of our first success proving incomplete, a large blister should be applied to the groin and parts adjacent, both above and below. These measures are to be varied and repeated according to the particular circumstances of the case." 456.

During the progress of the swelling, and accompanying evolution of heat, the limb should be cooled, and kept at a low temperature, by evaporating lotions, and exposure to the action of the atmosphere. To this practice Dr. D. attaches much importance. This treatment corresponds with what our able and judicious friend Dr. Dickson has laid down in the number of this Journal for July 1819. "The most successful mode of treatment," says he, "consists in the free and early use of leeches—in purgatives—cloths wetted with tepid fluids to abstract morbid heat—saline and antimonial medicines, according to the degree of fever—quietude and horizontal posture—and the pulvis ipecac. comp. or other occasional opiates to allay pain, or irritation. Dr. Dickson properly observes that—"where the patient is of a full, strong habit, with considerable symptomatic fever, it will be proper to take blood from the arm previously, and to enforce the antiphlogistic regimen." Dr. D. considers local bleeding, by leeches, as generally sufficient, especially if applied early, and in sufficient numbers. Twelve or eighteen should be applied to the groin, at the onset of the disease, and a smaller number repeated lower down, according to circumstances. It is hardly necessary to observe that, when the inflammatory symptoms have subsided, it will be proper to apply bandages, and stimulating applications to the surface, while tonics are exhibited internally.

Dr. Davis observes, that he is not aware of having derived any advantage from the exhibition of antimonials in this disease. Where it has been his object to reduce arterial action, and when he has met with cases of more than ordinary obstinacy, he has, of late years, had recourse to digitalis, in full and frequent doses—"viz. in doses of two grains of the powder (Battley's preparation) every two, or at furthest, every three hours."

> "My experience of this mode of exhibiting the digitalis in acute diseases, enables me to state with confidence, that it may be safely administered to adults, at such inservals, and in such quantities, until the patient shall have taken from twenty-five to thirty grains of it. It should then be proceeded with more slowly, until some one or more of its peculiar effects on the nervous system, or the circulation, be produced, when it should be immediately suspended ; to be again resumed, or not, according to circumstances. It will generally be an advantage to keep the circulation under its control, for several weeks, as an ensurance against the accession of the disease in the other extremity. I need not observe that the foxglove is a potent drug, and that it requires much caution, and constant watching in its exhibition. I generally combine it with a small quantity of the blue pill ; which, I think, prevents it, in a great measure, from nauseating the stomach. I do not approve of the use of active purgatives in this disease. The bowels, of course, should be kept moderately open, as, indeed, should all other important functions of the system, be placed under due and well-balanced regulation." 458.

In conclusion, we beg to say that, in differing in opinion with Dr. Davis on certain pathological points, we have done so with reluctance, as none can entertain a sincerer respect for that gentleman's talents, zeal, and attainments, than we do. But, conceiving it to be our duty and our right, to offer our sentiments with candour and freedom on the passing theories or practices of the day, we shall do so with diffidence ; but, we trust, also, with becoming firmness. We have no need to flatter—and we have no wish to offend.

IX.

Observations Illustrative of the History and Treatment of Chronic Debility; the Prolific Source of Indigestion, Spasmodic Diseases, and various Nervous Affections. By William Shearman, M.D Member of the Royal College of Physicians, President of the Medical Society of London, Senior Physician to the Royal West London Infirmary, and Physician to the London Dispensary. 8vo. pp. 225, London, 1824.

The motto which Dr. Shearman has affixed to his work is very appropriate. "Et imbecillis, quo in numero magna pars urbanorum, omnesque pene cupidi literarum sunt, observatio major necessaria est, ut quod, vel corporis, vel loci, vel studii ratio detrahit, cura restituat." *Celsus.* Thus we see that congregated societies, overgrown cities, sedentary habits, studious occupations, refinement of manners—in one word, high civilization, produced the same effects on the banks of the Tyber two thousand years ago, as we now see produced on the banks of the Thames. We every day observe a considerable proportion of our fellow-creatures in a state which cannot be classed under the head of either health or disease. There is a less than ordinary vigour of the functions, and yet no cognizable or positive affection of any part. This state we are forced to designate *debility*, which, as Dr. S. justly observes, is sometimes as distressing, or even as formidable, as actual disease, and not unfrequently as difficult of removal. This state then, which may be considered as occupying a neutral ground between health and disease, has been chosen by our author for the subject of the volume under review.

Dr. S. sets out with a caution against confounding that debility or weak state of the constitution inherited from birth, with that deviation or decline from the usual and ordinary degree of strength, which is either the termination of disease, or produced by debilitating causes. These states of weakness are essentially different, and require very different methods of treatment. In considering the history and treatment of debility, it is necessary to keep in view the different kinds of debility which are present to the practitioner. Weakness remaining after acute diseases is much more easily cured than weakness produced by the operation of debilitating causes, without the occurrence of actual disease. Our author notices an exception to this general rule which we consider a proof of his attentive and accurate observation. "In that particular species of catarrh, called influenza, there appears to be some exception to this rule; for, although the disease was, in every instance, of short continuance, yet, the debility produced by it continued, in some cases, for weeks, and even for months, and was with great difficulty removed."

We have, not unfrequently, remarked in our own practice, the great difficulty with which the constitutional powers of the patient are restored after attacks of this nature, whether epidemic or not; and we cannot too strongly guard the inexperienced practitioner against any premature attempts being made to invigorate the patient by the administration of tonics, or stimuli. The same objection, it is true, will apply to every case of general debility, the effect of local disease, but with additional force and propriety, when the pulmonary system has been the seat of previous derangement. For the purpose of enabling us to appreciate justly the relative proportion of living power, expended by each particular system, or order of structure, in a state of health, and to estimate the deviations from such healthy state, as well as to comprehend the means of obviating the ill effects arising from such deviation, our author premises some general observations on the exertion and reproduction of this power, for which we must refer our readers to the work itself. Dr. S. studiously and judiciously abstains from any romantic speculations upon the nature of the living power; his object is "only to state obvious and ascertained facts, connected with the exhaustion and reproduction of this principle."

"Diseases of debility," says Dr. S. "may be divided into those depending upon the increase of the mobility, and those depending upon the increase of the irritability of the system. In proportion to the weakness of the system, is the increase of these two properties of the body, irritability and mobility. By the increase of the former, parts are more readily excited to action, by stimuli applied to them; whether the natural stimuli, upon which their usual actions, in health, essentially depend, or external and adventitious stimuli; by the increase of the latter property, parts are more easily excited to action, by stimuli applied, not to themselves, but to other parts, in consequence of what has been called sympathy, or associated action. We are inclined to believe, that sufficient attention is not paid by many practitioners, in their treatment of disease, to the following facts, laid down by Dr. Shearman. A greater, or a more fatal error, cannot exist in the mind of the physician, than the belief that general and local debility proceed *pari passu*."

"Even diseases of strong action may take place in persons of very weak habits; for it is not uncommon, when the system in general is weak, for some part of the body to act strongly. Weakness even gives an irregularity to the whole system, so as to give stronger action to one part in particular than to the others. It will sometimes happen, that when the habit is weak the arteries will act more powerfully; and this may even give occasion to active hæmorrhage, a disease of strong action, as from the lungs, intestines or other parts of the body. Here, and in similar cases, although it is requisite not to neglect the appropriate treatment of the existing disease, it is essentially necessary to remove that state of debility which gave origin to, and maintains, the particular affection." 60.

It is justly observed by our author, that there are certain constitutional predispositions to particular diseases existing in some individuals, as to pulmonary consumption and scrofula: which diseases are more readily produced in a state of debility than they otherwise would be, and that frequently they are brought into action from this cause, in consequence of sufficient care not having been paid to support the vigour of the system. The progress of every disease is of course influenced by the existing debility, and the treatment requires a corresponding modification. In a very strong, and in a very weak habit, the same exciting cause may be productive of inflammation, but the disease will assume a very different character in the two constitutions. "In the former we shall usually have phlegmonous inflammation, with a strong tendency to suppuration; in the latter, erysipelatous inflammation, in which suppuration rarely, if ever, takes place when pure."

It does not come within the plan of Dr. Shearman's work to treat of the various modifications of particular diseases produced by chronic debility; but to offer some observations on the causes of that affection, and to endeavour to point out the most proper treatment of it, considered abstractedly and independently of any actual distinct disease with which it may at any time be combined. The direct and indirect causes of chronic debility are noticed, and the mode in which they act upon the human body pointed out. We agree in the following opinion of our author, and believe there are few practitioners who are not now aware that suppression of the menses is sometimes productive of consumption.

"It has been confidently asserted that pulmonary consumption is never the consequence of obstructed menstruation, but that in those cases where these two states are combined, the pulmonary disease has previously existed, and given rise to the obstruction. Every practitioner must have seen instances in which obstruction has taken place from some accidental cause, as cold, when no disease of the lungs had previously shown itself, and yet in some time after, the obstruction continuing, pulmonary disease has come on; whereas, in cases precisely similar, but wherein the menses have speedily recurred, no such disease has resulted." 94.*

The various debilitating causes which produce chronic debility by their primary and immediate operation are stated to be,

"1st. Various chronic diseases. 2dly, Long-continued evacuations. 3dly, Deficient supply of nourishment. 4thly, Inordinate use of stimulants or of sedatives. 5thly. Living in an impure atmosphere. 6thly, Warm climates." 101.

For the individual consideration of these several causes we must refer to the work.

The author now proceeds to speak of some of the most appropriate remedies, for the relief of these distressing ailments which are not more afflicting to the patient than perplexing to the practitioner. The same general principles obtain as in the treatment of other diseases. Chronic debility, the result of plethora, is, according to our author entitled to special attention, and for the removal of it many useful practical hints are suggested, particularly with regard to that common and obstinate state of weakness, which is the result of suppression of the menses in females.

"In the earlier stages of this affection, perhaps, the disposition to vascular contraction may be overcome by temporary weakening the action of the sanguiferous system by an evacuation of blood, the utility of which will be in proportion, not to the quantity drawn, but to its immediate effects upon the vessels; it sometimes happening, even from a very small quantity suddenly taken, that such a change is produced in their action as to prevent a return of this morbid disposition, at least for some time, during which, means may be employed for removal of the original cause, the suppression." 150.

In strong and robust females, bleeding is particularly demanded, and

"In persons of more weakly frames, should we succeed, by blood-letting, in suspending for a time the disposition to inordinate contraction in the vascular system, an opportunity will be afforded of exhibiting stimulants and tonics to produce the natural discharge. When, however, this disposition has continued for a long time, is partly kept up by habit, and has produced a very great degree of debility, it becomes a question, whether blood-letting is at all admissible, and whether it will not aggravate, instead of lessening, the mischief?" 151.

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* See Edinburgh Med. Journ. vol. vi. pp. 75, 175. Med. and Phys. Journ. vol. xxiii. p. 519.

The combined exhibition of stimulants and tonics in these cases answers much better than medicines of either class, singly. Whatever medicines are selected will require to be variously combined and frequently changed.

Some interesting observations upon deranged digestion, and upon the principles upon which particular kinds of food should be selected, are made, and to which our limits prevent us from giving as much space as they merit. Sarsaparilla is considered by our author, one of the most valuable remedies which we possess, when we require a sedative to take off the morbid contraction of the blood-vessels.

Various medicines are employed, with a view to diminish the irritability and mobility of the system, which are always morbidly increased in chronic debility. In our own opinion, the extr. conii, *if good*, is a remedy which will rarely fail to relieve the patient, and do credit to the physician. The use of opium, our author truly observes, in cases of chronic debility, requires considerable caution. Such is also the case with respect to wine.

Dr. S. does not enter into any discussion on the comparative merits of the various and well-known tonic remedies; he offers only a few remarks on the general principles which should regulate their use. A succession of different tonics, and various combinations of them, are often required. A pure air is essentially necessary in chronic debility, and regular exercise, modified, of course, by the yet remaining powers of the patient. Anxiety of mind is the grand, the formidable, and the frequent opponent to the success of any remedial means. Every exertion must be made to remove it.

Dr. Shearman's work will be read with much benefit by the student, and junior practitioner. The subject upon which it treats is of such frequent occurrence, is productive of so much bodily and mental suffering, that we must consider ourselves indebted to our author, for the attention he has bestowed on its investigation. At the same time, we think Dr. Shearman has done much injustice to his own talents, in selecting a subject which no talent could render very productive. If the maxim of Hippocrates be true, that—"similia similibus curantur,"—it is, we think, equally true, that—similia similibus gignuntur. In other words Dr. Shearman has expended a good deal of his own strength in combating the debility of his subject.

X.

CATARACT.

1. *Lectures on the Operative Surgery of the Eye: being the Substance of that Part of the Author's Course of Lectures on the Principles and Practice of Surgery which relates to the Diseases of that Organ; published for the purpose of assisting in bringing the Management of these Complaints within the Principles which regulate the Practice of Surgery in general.* By G. J. Guthrie, Deputy Inspector of Hospitals during the Peninsular War, Surgeon to the Royal. Westminster Infirmary for Diseases of the Eye, Consulting Surgeon to the Western Dispensary for the Diseases of Women and Children, Assistant Surgeon to the Westminster Hospital, Lecturer on Surgery, &c. &c. &c.

2. *On the Nature and Symptoms of Cataract, and on the Cure of that Disease in its early Stages, by a Mode of Practice calculated to prevent the Occurrence of Blindness, and to render unnecessary the Operations of Couching and Extraction. Illustrated by Cases.* By John Stevenson, Esq. Fellow of the Royal College of Surgeons; and Surgeon, Oculist, and Aurist to his Royal Highness the Duke of York, &c. &c. London. Whittaker, 1824.

3. *Practical Observations on the Removal of every Species and Variety of Cataract, by Hyalonyxis or Vitreous Operation; Illustrated by Cases, with Critical and General Remarks on the other Methods employed.* By John Bowen. M.D. Fellow of the Royal College of Physicians, Edinburgh; Member of the Royal College of Surgeons, London; Member of the Fiso-critics of Siena, and of the Arcadia of Rome; Corresponding Member of the Georgofili of Florence, &c. &c. &c. London. Callow, 1824.

We have already dedicated two articles to the review of Mr. Guthrie's Lectures on the eye, and now resume the subject with the intention of confining ourselves, on the present occasion, exclusively to the consideration of cataract. The vast importance of the subject requires no proof. For the erroneous and absurd opinions that were once entertained, both upon the nature and treatment of cataract, we must refer to systematic works upon the subject. Our pages may be more profitably occupied by a condensed statement of what we do know, than by an erudite and lengthened detail of what our ancestors did not know. Briefly, however, we may remark that, in 1709, Heister, St. Yves, Petit and Daviel, established the opinions which had previously been advanced by Maitre Jan. The true nature and seat of the disease now became gradually known. Many fanciful speculations which still existed, have been gradually driven from the schools, and, by the ingenuity of various men of talent and industry, great and important improvements have, from time to time, been suggested on the instruments which are necessary in the operation. Mr. Guthrie presents us with a copious epitome of the opinions of the present day, and we are inclined to regard his personal illustrations with all the attention to which his ability and extensive practice so justly entitle him. He commences his observations upon cataract, by an enumeration of the many distinctions which have been admitted, some of which are as fanciful as they are useless, from their not being available in practice.

> "There is, however, a very important distinction, which is frequently neglected, between idiopathic or constitutional, and local or accidental cataracts; not, as in the previous case, referring to the change which has taken place in the structure or appearance of the lens, or to the manner of operating, but to the comfort and happiness of the sufferer. The idiopathic or constitutional disease, affects, in general, both eyes, the local or accidental being more often confined, under proper management, to the organ which has been injured either by external violence or active inflammation." 190.

To prevent the constitutional form of cataract is not in our power. We cannot foresee its commencement. Persons of all ages are subject to it; more particularly, however, those at an advanced period of life. No peculiar temperament enjoys an exemption from cataract, nor has it been found to prevail in those of any known constitution, disposition, or idiosyncrasy.' Mr. Guthrie believes that neither scrofula nor syphilis have any share in the production of the disease, unless under particular circumstances, when it is no longer idiopathic. Strumous affections of the eye rarely extend to the interior of the organ. "Syphilis affects the iris with an inflammation, conceived by some persons to be peculiar to the disease, and by contiguity causes an adhesion to the capsule of the lens, producing opacity: but this is an immediate derangement of the part, the effect of which we can predict, and which occurs alike from inflammation not presumed to possess any specific character." However frequent and severe may have been the attacks of syphilis, no facts have yet been adduced to prove that the subjects of them have been particularly liable to cataract. Mr. Guthrie is also opposed to the opinion, that rheumatism and gout have some influence in the formation of the disease. That an hereditary predisposition for cataract, as well as amaurosis occasionally exists, is admitted as a fact for which we cannot account.

"The influence of the constitution in the formation of idiopathic cataract is beyond our means of detection; we can only acknowledge the fact of such an influence existing, and observe the effect, which is in general not confined to one, but extending to both eyes, and with such regularity, that few people who suffer from this complaint in one eye, escape, after a time, the disease in the other; the period between it, in both, is various; occasionally it commences at the same time, although in general one eye is first affected, the other subsequently following the same course; more rarely the second one becomes affected after a considerable interval; while few persons live to an extreme old age, having had a cataract in one eye, without having it also in the other. The prognosis, then, in constitutional cataract, as to the probability of one eye escaping, the other being affected, is extremely unfavourable." 193.

The symptoms and appearances common to the various kinds of cataracts are thus described by our author.

"The general symptoms of cataract, both in the idiopathic and accidental diseases, resemble each other at one period of the complaint, yet are of course essentially different in the first instance. In the accidental formation of cataract they are well marked and defined, as being principally *external* or *visible* to our senses. In the idiopathic cataract they are at the same period of formation, and for a considerable time afterward, for the most part *internal* or *occult*, being invisible to observers and dependent upon the patient's own perceptions, until such time as a change in the structure and transparency of the lens or its capsule has taken place, which may be discovered on a careful inspection.

"When persons are about to suffer from idiopathic cataract, they generally complain of a little weakness of sight, which renders them unable to see objects at as great a distance as formerly; this in a short time increases, so as to render near ones more confused, a greater degree of attention is required to fix and distinguish them accurately, and even then they appear through a mist, or as if seen through a transparent yet turbid fluid, or a glass which has been breathed upon. This indistinctness of vision is constant; no change or rubbing of the eye or motion of the head gives relief, while the patient remains exposed to the same degree of light, but on darkening the room the sight is in some cases, and especially at an early stage, considerably improved, although there is still a central cloud or smoke which cannot be overcome. This advantage is gradually lost in a moderate light, and the patient finds that he is obliged to bring every object nearer his eye to distinguish it correctly, whilst it is often more readily seen from one side than when placed in the axis of vision; he sees best in twilight, when the pupil is most dilated, especially if the opacity be central; and, for the same reason, vision is improved by turning the back to the light; or, in the early stages of the disease, by using clouded glasses, which act in the same manner. On looking at a lighted candle, the flame does not appear as clear and distinct as usual, but seems as seen through a mist and surrounded by a halo, or burr as it is sometimes termed in the North of England; which, when the disease is not complicated with an affection of the retina, is always white or clouded white, and not of various colours, especially either red or blue, or intermixed with what the patient terms flashes of light. This white halo becomes also broader, and the object more indistinct, as it is further removed from the eye. These defects increase with greater or less rapidity, the form of objects is lost, their shadow can, however, be observed between the eye and the light, and the patient is at last only able to distinguish between light and utter darkness, or he may be entirely deprived of every sensation, without having suffered any pain. These essential internal signs are frequently accompanied by others which are not so diagnostic, and which more often appertain to other diseases or derangements. There is frequently an appearance of black specks, of dust, flies, or cobwebs floating before the eyes; flashes of light sometimes dart across them; the candle seems surrounded by burning circles or rings, of divers colours; or a dull pain is felt above the orbit, or at the bottom of the eye; but these symptoms are rather dependent on derangements of the retina or other parts of the eye than of the lens itself; they are not essential to cataract, are with dulness of vision incidental to many complaints, and indicate, when accompanying cataract, the existence of other disease.

"The essential external signs of cataract are infinitely more decisive, inasmuch as many of them are peculiar. In constitutional cataract they may, I believe, be said invariably to follow the internal ones, and the indistinctness and dulness of vision have existed some time before an alteration of structure can be detected in the eye, rendering the diagnosis difficult in many cases, at an early period, between cataract and the mild incipient amaurosis. In a short time, however, the change becomes apparent on a careful examination, a slight general haziness or muddiness may be discovered, which is often of a deeper shade towards the centre in the situation of the lens, giving the back part of the pupil an appearance as if seen through an opaque or muddy substance. The iris is sometimes slightly dilated in a moderate light compared with the healthy eye of another person; the pupillary edge, especially where the disease is a soft cataract, puts on a darker appearance, as if it were surrounded by a narrow black ring, which is in fact the posterior edge of it, pushed forward in consequence of the increasing size of the lens. If the dilatation be increased to its full extent, by the application of the extract of belladonna, an internal blacker circle will be seen to surround the turbid or muddy part behind the iris, and the patient sees better for a short time than he did previously to its application. The partial loss of transparency soon increases to a state of opacity, proceeding, for the most part in the same manner, from the centre progressively to the edge of the lens; the jet black colour of the pupil is lost, and the space behind the iris is occupied by an opaque body of various shades of colour, from gray to silvery or dead white, to yellow, brown, or a shade approaching to dirty black." 197.

To be correct in our diagnosis and prognosis, particular attention is demanded to the state of the iris, which often distinguishes the constitutional from the local cataract, and marks the complications of disease which may render an operation unadvisable, useless, or improper. Let it not be forgotten that

"The association or sympathy between the eyes is so strong, that the motions of the iris of one eye involuntarily follow those of the other; and if we examine the affected eye, whilst the healthy one is exposed to the same light, we shall have, in all probability, an action of the iris sympathetic with that of the healthy eye, rather than dependent on its own susceptibility for stimuli; whence the rule of covering the sound eye under any examination or performance of operation on the diseased." 198.

Mr. Guthrie makes some important observations upon the different ways in which the motions of the iris are influenced.

Our limits oblige us to condense the detailed remarks he offers upon this part of the subject. A healthy state of the iris may *generally* be considered a good, although not an unerring index of the healthy state of the retina. A diseased state, or loss of function of the iris, by no means indicates, although it may lead to a suspicion of a diseased state of the retina. A case is mentioned in which the author operated for artificial pupil on the right eye of a man, who had been blind twenty-two years; no light being transmitted to the retina, and yet at the end of that time it retained its susceptibility for impression, and the patient can now see to read very well.

> "It is on the integrity of the healthy susceptibility of the iris for light, and not of the retina, that the contraction and dilatation of the pupil depend in cases of cataract; that a patient suffering from incipient cataract sees best towards evening, or in a moderate light, in consequence of the dilatation of the pupil allowing the rays of light to pass on to the retina through the edge of the lens, which is not so opaque as the centre, and is exposed by the enlargement of the pupil. It is in consequence of the light passing through this edge obliquely, that persons suffering from cataract often see better when they place objects to one side. We endeavour to produce this effect by the application of the belladonna, which causes the pupil to dilate, and allows the transmission of light in the same manner to the retina, which, in general, remains unaffected by it; for, if it were equally under the influence of the application, the patient would not see although light fell on the retina. I have met with several instances of persons using belladonna for months with evident advantage; but still it is a fact equally deserving attention, that in some instances the belladonna seems from the first to paralyze the retina as well as the iris, the sight being either destroyed or rendered much more indistinct until the effect of it had ceased. When given internally and in large doses, it not only influences the motions of the iris, the ciliary and the optic nerves, rendering vision very indistinct, or even destroying sight, but all the nerves of the face connected with the organ of vision; whence its efficacy in some cases of tic douloureux." 201.

By many writers it has been asserted that, if the iris retains its power of motion, the retina is endued with sensibility. It is now known that this rule is liable to many exceptions, and that he who invariably confides in it, will consequently be sometimes led to form an erroneous judgment. In consequence of adhesions being formed between the iris and the capsule of the lens, the motions of the former may be prevented, and it may remain fixed and dilated or fixed and contracted; or it may be fixed and dilated in consequence of pressure from the lens and parts behind. In such cases the diagnosis is important, and may be accurately formed by suitable attention. If the iris is insensible from deficiency of susceptibility for light, whether natural or acquired by sympathy with the retina, the space between the capsule of the lens and the posterior part of the iris, which is called the posterior chamber of the aqueous humour, is preserved.

"The distance between the edge of the pupil and the lens is perceived, and appears to be more or less natural according to the state of dilatation, which must be taken into consideration. If the belladonna be applied, the pupil becomes fully dilated and the capsule exposed in nearly all its extent: it is often long in returning to its natural state, and it is even possible the pupil may remain partially dilated, but always preserving its circular form. If the immobility of the pupil depend on adhesion between the capsule of the lens and the uvea or posterior part of the iris, it may be suspected from the diminution of the natural space between these parts, by the irregular appearance of the edge of the iris, and by that of the capsule of the lens; it will be proved, and the attachment shown, by forcibly dilating the pupil by the application of belladonna. Immobility of the iris, and especially in the contracted state, is generally the consequence of previous inflammation; it is therefore a local disease, and implies nothing with relation to the retina beyond what we may calculate upon as the effect of inflammation. The iris is generally irregular and puckered, there is no space between it and the capsule; the one adheres to the other; the capsule is always opaque and white, although in a greater or less degree of intensity; and on the continued application of the belladonna, the iris becomes more irregular, if it yield at all, and then shows more marked points of attachment. If the iris be not contracted, or even if it be rather dilated, it always shows the edge of the pupil of a darker colour; and, on the application of the belladonna, it dilates and becomes irregular at the points of attachment, which are then conspicuous. In cases of cataract of long stating, it is possible that adhesions may be formed between the capsule of the lens, and the iris, from the simple increase of the lens causing it to press against the iris, or from slight irritation; but in these cases the pupillary edge will seldom or never preserve its natural colour, although it may remain unaltered in shape, whilst the iris may be very sluggish or nearly motionless; but the fact of attachment may be readily proved by the application of the belladonna, and a surgeon is highly reprehensible who does not dilate the iris by it some time before he operates, even if he be certain there is no attachment, because it is the only way in which he can acquire a full view of the surface of the cataract, and in many cases obtain information as to its nature." 203.

Immobility of the iris is not a sign in cataract of paralysis of the retina, especially where there are attachments to the capsule of the lens.

"But where the space of the posterior chamber is entire, or the iris does not seem to be dilated by the pressure of the lens, it is a most unfavourable symptom, and when combined with a total impossibility of distinguishing the shadows of bodies, or of light from darkness, it nearly amounts to a prohibition of the operation, which ought on no account to be performed, if it be accompanied by pain in the eye, orbit, or forehead, or with flashes of light shooting through the eye, which indicate amaurosis, or approaching disorganization. When the immobility of the iris only marks its want of sensibility, and the patient can readily distinguish light from darkness, there is good authority for performing the operation, and it is right to attempt it, where the patient has suddenly been deprived of that power from inflammation, because it may have occurred in consequence of adhesions. But if it have suddenly occurred, the pupil remaining of its natural size, or being dilated, there is little or no hope of success, and particularly if both eyes are affected." 204.

To prove the necessity of closing the sound eye during the examination of the diseased one, Mr. Guthrie mentions an interesting case in which the patient "is completely blind, so as to be incapable of distinguishing light from darkness. The iris is slightly discoloured, the pupil is black and of a moderate size, and remains unaffected by the stimulus of light when allowed to fall upon it alone, although it is enlarged or diminished according to the motions of the iris of the opposite eye. When the sound eye is covered, the pupil of the diseased one is immediately dilated to a moderate extent, and remains in that state, and immoveable even under the influence of the full glare of the sun. But if the sound eye be uncovered and exposed to the same degree of light, both pupils are instantly contracted. If a cataract were to be formed in this case, the state of the iris might escape detection, unless carefully inquired into when the sound eye was closed." This sympathy of the iris of one eye with that of the other, when the sympathy between the iris and retina of the same eye is destroyed, is not unfrequent, and should be constantly borne in mind.

"The iris must also be examined as to the correctness of the manner in which its motions of contraction and dilatation are performed. In the natural state of the eye, the iris is a perfect plane not protruding forwards or slanting backwards, and is without folds or plaits. A deviation from this appearance indicates derangement, in consequence of pressure from behind, or of its own structure, either of which may influence the mode of operating, as will be hereafter mentioned. The plane of the iris is preserved by a due degree of pressure before and behind, anteriorly by the aqueous humour supported by the cornea, and posteriorly by the quantity of the aqueous humour contained in the posterior chamber supported by the peculiar firmness of the crystalline lens. In this space the iris moves, displacing from one part to another the aqueous humour as it either dilates or contracts; but this is accomplished with such precision, and the balance of pressure appears to be so little disturbed, that the iris performs these motions without any vacillation apparent to our sight, a fact of great importance as a diagnostic sign of a lenticular cataract; for it appears that it is mainly on the presence and consistency of the lens that the equilibrium of pressure depends, and not on the fulness of the eye, for the increase of aqueous, or of vitreous humour, the lens being removed, or even dissolved in its proper capsule, will not answer the purpose, the iris obtaining under these circumstances a tremulous motion, indicating the absence of the lens. This circumstance is frequently attributed to dissolution of the vitreous humour, which is also capable of giving rise to it: but I am satisfied, it is not the most common cause in cases of cataract; for, in all those on which I have operated with restoration of sight, when this sign was present, I have found the cataracts to be capsular, the lens having been absorbed or become fluid. In these cases previous pressure on the eye with the point of the finger had convinced me, by the resistance it met with, that the vitreous humour was of a proper consistence; and in two cases on which I operated by an opening in the cornea, a sufficient quantity of the vitreous humour escaped in removing the capsule, to enable me to ascertain the fact and to convince me of the propriety of the opinion I have formed as to the cause of such appearance. In all cases of cataract, then, pressure should be made on the eyeball with the finger, to ascertain the degree of consistency of the vitreous humour; if thin and watery the eye will yield to it, and the iris will acknowledge the pressure in a very decided manner, when the disease is advanced to the tremulous state I have alluded to, and which is best seen under general motion of the eye exposed to great variations of light and shade." 206.

In a note, Mr. Guthrie observes that the above remarks on the motions and sympathies of the iris have formed a part of his lectures, and have been publicly delivered at the Infirmary twice every winter for the last six years, independently of the necessary recurrence to them on many other occasions, in pointing out the symptoms diagnostic of cataract from other diseases. The Baron Larrey in France, and Mr. Shaw in London, have within the last year published a part of them as peculiar to their observation. Important information is to be gained from an examination of the cataract itself: its situation and influence upon the iris having been previously estimated, the oculist should endeavour to ascertain the changes of structure or quality which have taken place, from the appearances the part may have assumed. This discrimination is confessedly difficult. The great Scarpa is of opinion that it is not easy to pronounce whether the cataract be hard or soft, caseous or fluid, and whether, together with the opacity of the crystalline lens, the capsular membrane which envelopes it be also opaque.

"In this opinion," says Mr. Guthrie, "Scarpa is supported by all the oculists in Europe, with the exception of Sir William Adams," who conceives the learned Professor is mistaken upon this point. Sir William admits that no verbal or written description can convey to an inexperienced practitioner an accurate idea of the various kinds and shades of cataract, but contends that an oculist of just and accurate observation will rarely be deceived in his opinion upon the nature of the cataract upon which he is to operate.

We must refer to the work itself for the diagnosis between cataract and other diseases. The causes of cataract are still enveloped in considerable obscurity, "which is not likely to be cleared away, until the nature and formation of the lens is better understood." In the opinion of Mr. Guthrie, many of the exciting causes which Professor Beer enumerates are referrible to amaurosis, and many of them may be doubted as applicable to cataract.

The following observation of our author demands attention.

"It is a fact which I wish to impress on the minds of students, that those inflammations of the iris and ciliary processes, which are active in their nature, and quickly cause a deposition of lymph, and in considerable quantity, are the most easily recovered, and the capsule of the lens thereby restored to its natural state, unless the disease has been too long neglected; whilst those inflammations of the same parts which are slow in their progress, and cause the deposition of a small quantity only of lymph scarcely perceptible, but from its effects in attaching the iris to the capsule of the lens, are very difficult of cure, and generally leave some defect. In the former cases, when neglected, the disease terminates in cataract, with an adherent iris, and possibly a closed pupil. In the latter the pupil becomes irregular, is attached to the capsule of the lens, which becomes opaque in points, and may be completely so. The eye is likely to become amaurotic, or glaucomatous, from repeated recurrences of the inflammation, if that which has already taken place has not been sufficient for the destruction of vision." 227.

Various classifications of cataract have been adopted by various authors. Some arrangement is necessary; and Mr. Guthrie properly selects that which is the most efficient, and least troublesome. He divides cataracts into two classes. The true, and the false, or spurious cataracts.

"The first class, or the true cataracts, containing three genera, or all those, of whatsoever description they may be, which have been caused by derangement or disease of the lens or its capsule, or by both; but unconnected with any perceptible derangement or attachment to the iris or adjacent part.

"Three genera.
"1. Cataracta lenticularis, or lenticular cataract.
"2. Cataracta capsularis, or capsular cataract.
"3. Cataracta capsulo-lenticularis, or capsulo-lenticular cataract.

"The second class, or the false cataracts, containing all those previously noticed or otherwise, which are combined or connected with derangement of the iris or adjacent parts, as a consequence resulting from inflammation.

"The term *complicated* may be retained to mark the presence of other and more important diseases, such as amaurosis, glaucoma, cirsophthalmia, &c." 227.

The lenticular cataract is divided into four species. 1. The hard. 2. The fluid. 3. The soft. 4. The caseous. Several pages are occupied upon the distinguishing symptoms of these various kinds of cataract, which, as we have stated already, require a well-practised eye for their detection. Upon the subject of spurious cataract, it is to be observed that,

"The history of a case of false cataract is very important, as it will frequently point out its nature, and with the appearances of the part itself, indicate what probability there is of success attending an operation for its removal. A false cataract being the consequence of injury or of inflammation, its formation has been attended by more or less pain, which is frequently violent, and often followed by extinction of sight. In all such cases, the iris, the choroid coat, and the retina, will have become diseased, and it may be readily complicated with amaurosis, glaucoma, or cirsophthalmia, the symptoms of which will be, in general, sufficiently evident. Those which are deduced in amaurosis from the state of the pupil, and the susceptibility for light must be defective, inasmuch as the iris is attached to the capsule of the lens, which is itself thickened, and nearly impermeable, to light. Shadows of objects passing between the eye and the sun, on a clear day, can be observed in most persons whose eyes are not amaurotic. The pupil, in the majority of these cases, is diminished in size, the edge of it firmly attached to the capsule of the lens, and although a part of it is visible, the opening would be too small for correct vision, even if the opacity could be removed. They come, therefore, under the consideration of those states of the eye which require an operation for *closed* or for an *artificial pupil*." 245.

On the Cure or Removal of a Cataract. Mr. Guthrie is by no means sanguine in his expectations of curing even incipient cataract by medicinal means. Opacities of the capsule of the lens may be sometimes arrested, or even removed, when they arise as the consequence of common inflammation, and do not constitute the true idiopathic capsular cataract. To determine the proper period for operating is evidently of importance. The better the general health of the patient, the greater is the probability of success. In some cases, previous preparation may be necessary, whilst in others it will not be required. The patient being temperate, and in good health, will need only to abstain from animal food for a couple of days before the operation, and to take an aperient. The operation should, if possible, be avoided during pregnancy. Much contrariety of opinion exists as to the propriety of operating upon one eye whilst the other remains sound. Mr. Guthrie is decidedly of opinion that, as far as the improvement of sight is concerned, the operation should not be attempted on one eye, if the other is in a healthy state. It is not possible to determine positively how far the removal of the cataract in one eye may delay or prevent the formation of it in the other. The performance of the operation upon both eyes at the same time, has, by some authors, been strongly recommended, and by others, as urgently deprecated. Scarpa* recommends us to wait till the eye first operated on is well. Beer adopts a middle course; he is of opinion that, when cataracts are completely formed, and every thing promises a favourable result, both eyes may be operated on at the same time. In this opinion Mr. Guthrie concurs; he adds "that if any accidental circumstance should take place during the first operation, rendering its success doubtful, the second should be delayed to a future opportunity."

The operations for cataract have, from time to time, undergone many changes, both in the mode of performing them, and in the instruments by which they are accomplished. It would be to no purpose to detail the many progressive improvements which have been suggested by the gradual detection of erroneous principles.

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* Scarpa, by Briggs, page 356.

On the Operation by Displacement. Mr. Guthrie observes that this operation has been usually termed couching or depression, which was sufficiently comprehensive so long as there was but one mode of performing it. Since several methods have been recommended, not only differing essentially from each other in the operative process, but in the manner of displacement, and the subsequent position of the lens, it is advisable to have a term for the operation generally, which may not interfere with, and lead to a false conception of each kind of operation individually. The operation by displacement, is divided by our author, First, into operations posterior to the iris; containing 1, simple depression; 2, depression of Scarpa; 3, reclination of Willberg and Beer. Secondly, into operations anterior to the iris. Reclination through the cornea.

On the Operations posterior to the Iris. 1st. Simple depression, consisting in dislodging the opaque lens from its natural situation, and placing it in the vitreous humour, so far from, and under the level of the pupil that vision may not be prevented.

"It is fairly divisible into three parts. 1. Introduction of the needle. 2. Placing it on the anterior surface of the lens. 3. Removing the lens out of and below the axis of vision."

"The patient is to be placed, and the eye fixed in the manner recommended for extraction, the pupil having been previously dilated by the belladonna. The small spear-pointed needle is to be held steadily but lightly, like a writing-pen; the little finger resting on the cheek bone, or side of the orbit, so as to give due support to the hand, and prevent the needle from entering violently, or going too far, if the toughness of the sclerotica should require a considerable degree of pressure to be made. It should penetrate the sclerotica about a line and a half from the edge of the cornea (not nearer than a line, not farther than one and a half) and half a line below its horizontal diameter, to avoid the long ciliary artery; the point being directed toward the centre of the eye,* so that it does not enter directly on the lens, and change its position, pushing it towards the nose; one flat surface of the needle should be upwards, the other downwards.† The triangular point of the needle is to penetrate in this direction, until the neck of the instrument has entered the wound. The first step of the operation is then completed, and the second begins with a double motion of the needle, which requires a little dexterity. The direction of the point of the needle is to be changed from the centre of the eye toward the nasal edge of the pupil, which can only be done by carrying the handle backwards toward the temple, and as it approaches this new direction, it is to be turned so far (a quarter of a circle forwards) on its axis, that the flat surface, which at the commencement of the operation was upwards, may now be turned towards the operator. It is in fact in the position it would be in, if it had been introduced in the manner more commonly adopted, and it is to be passed on in its new direction, until its point and flat surface are seen advancing behind the temporal edge of the pupil. It is to be carried on in the posterior chamber between the iris and the cataract, until the point has fairly passed the nasal edge of the pupil. One flat surface is toward the cornea, the other pressing on the cataract. The second stage is now completed.

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* Hey's Surgery, page 63. Beer, Leitfaden, s. 88.

† Warner, page 95.

"These two stages are equally applicable to the operation of reclination through the sclerotica, and the knife is in the same situation as it would be in for the division or breaking up of a soft cataract, save that it is not quite so far across the lens toward the opposite side.

"The third stage commences by a double motion resembling that of the second; the handle of the instrument is to be depressed, so that the point of the needle may be elevated to the upper edge of the cataract, on which the broad flat surface of the instrument must be placed, by giving it a quarter turn backwards on its axis. The posterior flat face of the needle, which pressed against the face of the cataract, is now on its upper edge, and the needle is (excepting the elevation of its point) in the same situation as when it was first introduced. The third stage is now completed by raising the handle, and firmly depressing the cataract downward, and a little outward. The handle of the needle should not be raised above the horizontal position, but it should be kept there steadily for a few seconds, to prevent the lens rising again, when the point is to be gently raised. If the lens remains depressed, the object of the operation is completed, and the needle is to be withdrawn in the same manner as it was introduced, only with the motions in an inverse order. If the lens rises up after the instrument, the depression must be repeated, and again a third or fourth time, with a longer interval between each attempt, until it can be lodged below the level of the pupil." 269.

For the performance of the operation, Mr. Guthrie prefers Beer's needle. He considers it a point of great importance, and fully established in this operation, that the lens is on no account to be pierced, and that the integrity of the lens is to be preserved, if necessary, at the expense of the ciliary processes.

In opposition to Beer, and the oculists of the German school, Mr. Guthrie maintains that either the lens or the ciliary processes will be injured. He considers the dangers which have been said to arise from division of the ciliary processes to be much exaggerated, and remarks,

"That the ciliary processes are parts of great importance, in a healthy state of the eye cannot be doubted, from an examination of their structure and distribution; but that a principal part of their utility terminates with the removal of the lens, is, I think, almost equally well demonstrated in many cases of operation, especially by division, where they must have sustained considerable injury, and yet the vision of the patient has been as good, and continued so, as in any other case of cataract after operation. I have seen this very often, I have done it repeatedly, and therefore affirm it as a fact; but it is not a lesion of the functions of the ciliary processes that is, we are told, principally to be dreaded from wounding them, but instant hæmorrhage into the chambers of the eye, obscuring the view of the parts through the pupil preventing the completion of the operation, or rendering it necessary to finish it as it were in the dark, and incurring the risk of a great and destructive inflammation. If this were actually a fact, I am not certain which of the two injuries would be the worst; but I have no hesitation in saying that these dangers are imaginary, not real, that the ciliary processes may almost always be cut or divided without fear of their bleeding; I have cut them repeatedly, without this or any bad effects whatsoever, either at the moment or any subsequent time." 272.

The operations of Scarpa, Willberg, and Beer, are given at full length. We must refer to the work for their description, and for many ingenious observations suggested by Mr. Guthrie upon the subject. He is of opinion that the choice of the operation, in able hands, is nearly a matter of indifference. He prefers, however, the operation of reclination.

The operation of reclination through the cornea, by introducing the needle anterior to the iris, has been principally introduced and supported by Professor Langenbeck of Gottingen, and is intended for hard cataracts only.

After-treatment. The operation having been completed, examinations to ascertain whether the patient can see are useless and improper. "As the needle is withdrawn, the eyelid ought to be allowed to drop, and need not be reopened." The admission of light is to be prevented, a suitable bandage applied, and low diet observed for several days. On the third or fourth day, the eye may be opened, with the back turned to the light. It will be found more or less inflamed, and must be treated according to circumstances. Violent vomiting sometimes comes on immediately, or a few hours after the operation. At any period this occurrence is unfortunate, as it may, from the exertion and shock, cause the lens to reascend, and in addition to the injury already committed, prove a source of greater mischief, by irritating the iris. Opium, saline draughts, and camphor should be given to allay this distressing symptom. Upon the subject of the operation by extraction, a considerable space is occupied. The opinions of various authors are stated, and the mode of operation minutely described. Considerable dexterity and experience are necessary in the performance of it. For a mass of important information upon the subject, we must refer our readers to the work itself.

On the operations for the Division, or Breaking-up of the Cataract. 1. Posterior to the iris. 2. Anterior to the iris, or through the cornea. The keratonyxis. Mr. Saunders tried several methods of proceeding, both posterior and anterior to the iris; first, by breaking up the lens, and pushing it into the anterior chamber of the aqueous humour, and latterly, by merely opening the centre of the capsule, and allowing the lens to remain in situ until removed by the absorbent process. "Further experience," says Mr. Guthrie "has not decided in favour of the latter method, and I consider the former to be the better operation, as facilitated by the use of the two-edged needle, recommended by Sir William Adams, whose method of proceeding is described in his work. *The operation for dividing or breaking up a cataract, should never be attempted when the lens is hard, according to the opinion of Mr. Guthrie.

The operation anterior to the iris, is not recommended by the author as one to be preferred for the removal of a cataract, although, he observes, "I have found it useful as a preliminary step, where the cataract has been very soft and large, pressing against the iris, and rendering it convex."

The Operation for Capsular Cataract. An operation for capsular cataract alone necessarily implies the previous removal of the lens, either by absorption or operation. The removal of the capsule from the axis of vision is difficult of accomplishment, and sometimes several operations are necessary before the desired success is obtained. Mr. Guthrie recommends,

> "That the capsule be first separated as much as can be conveniently done, from its attachments, by one operation posterior to the iris, with the needle, and then extracted at a subsequent period, through a small opening in the cornea; for a repetition of the use of the needle will be attended by the same difficulty, and at last recourse must be had to evulsion and removal through the cornea. The eye being fixed, Scarpa's needle, or one (which I prefer) less bent, being slightly curved towards the point, and cutting on both edges, is to be introduced and brought in front of the capsule in the usual manner. It is then to be carried to the opposite side, the pupil having been previously dilated by the belladonna as much as possible, and the capsule is to be separated from its attachments: by working with the edges and points of the needle, it will give way in parts, under gentle pressure; but other points of attachment of great firmness will remain, appearing to resist almost any degree of pressure that can be applied by either the cutting edge or point of the needle. As much, however, as can be done consistent with the safety of the eye under such circumstances, is to be attempted for the purpose of loosening or separating the capsule; and if this should be happily effected, it may be pushed into, if it cannot be thrust through, the pupil. The inflammation which may ensue having subsided, the second operation is to be performed in a few days, in the following manner: the patient must be placed on his back, and the external part of the cornea opened for near one-fourth of its extent, but where the transparent cornea is large, one-fifth will be sufficient; for, if room be not given for the easy introduction of the instruments, the irritation in passing them in will be the cause of a greater subsequent opacity of the cornea, than the mere size of the incision can possibly be, whilst the chance of a

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* Sir William Adams's New Operations for the Cataract, p. 225.

protrusion of the vitreous humour will be rather diminished than increased; for, if the opening be sufficiently free, the flap rises, and there is no pressure on the ball of the eye; but if the opening be confined, it is the sclerotica that yields, and the vitreous humour is compressed. Two instruments ought now to be at hand, a small but sharp hook, and a pair of spring forceps serrated within the points. I generally first employ the hook, by passing it into the pupil, and under the capsule, which being pierced upwards, is to be drawn steadily but not forcibly out of the eye; sometimes it will yield, and the operation is almost immediately completed; at others it may be drawn just without the cornea, and its attachment divided with the scissors, or it may be so tough that the hook will not take sufficient hold, and slip, or bring away only a piece. I then try the forceps, which are to be introduced shut until they reach the capsule, when the blades are to be opened, and made to close on as much as possible of the membrane intended to be removed; the spring will now keep the blades together, and prevent the capsule slipping from the points of the forceps, which are serrated within. If the forceps be now drawn out, it is evident the capsule must come with them; but in doing this, the surgeon will sometimes perceive that he turns the hyaloid membrane on its axis, or that he pulls it so much towards him, that the vitreous humour is compressed against the side of the sclerotica, and bursts from its cells, a portion being evacuated; for the hyaloid membrane, in many cases of this kind, becomes exceedingly dense and strong, much beyond what might be conceived from an examination of its healthy structure. The capsule should not then be forcibly torn out, but the forceps turned on its axis, by which means the capsule is wound round the blades of it, the evulsive force is more equally divided on the surface of the hyaloid membrane, and is more easily regulated. If this operation fail, the scissors must be introduced, and the attachment divided as close as circumstances will admit. Proceeding in this way, and with due caution, greater liberties may be taken with the eye than could be supposed, and with perfect safety; for the inflammation, if any follow, is very manageable, by simple means." 339.

For a description of the compound operation of displacement and extraction, we must refer to the various authors who have considered the subject, or to Mr. Guthrie's book, which contains an abstract of their opinions. Mr. Guthrie concludes the subject of cataract with a detailed consideration of the advantages and disadvantages attending the various modes of operating, as applicable to the different species of cataract. This subject has undergone frequent and warm discussion, and oculists are still far from being agreed as to the particular operation demanded for each peculiar case. The volume terminates with a chapter on artificial pupil. Thus then, we have at length arrived at the termination of Mr. Guthrie's work, and we candidly confess we have seldom had a more difficult task presented to us than that of offering to our readers an abstract of this volume, without trespassing very much beyond the limits to which we are sometimes unwillingly compelled to restrict ourselves. They who are interested in the operative surgery of the eye, will here find a mass of important information. The opinions of most authors who have written upon the subject are candidly stated, and cannot have been collected without immense labour. Every author who professes to give a systematic work upon so extensive a subject as the operative surgery of the eye, must necessarily state much that has before been stated. "*Vera non nova*" must be his chief maxim. For this additional proof of talent and unwearied zeal Mr. Guthrie not only deserves, but will receive the thanks of his professional brethren.

Mr. Stevenson's work now comes under our notice. The object of it is to make known the more mature fruits of Mr. S.'s experience, since the appearance of his last production on cataract. The intention is laudable; the mode of its execution is now to be examined. In the last page of the preface, we are informed, that "the omission of a longer list of cases has arisen, not from any deficiency in their number, but because the author deemed it superfluous on the one hand to record them, and on the other, their insertion would tend to augment the size and enhance the price, rather than add to the value, of the work." We augured well from this sentiment, and sat down to the perusal of the book with an expectation of at once being introduced to "a mode of practice calculated to prevent the occurrence of blindness, and to render unnecessary the operations of couching and extraction." A reviewer, however, is not unfrequently doomed to wade through some pages of common introductory matters, the insertion of which "tends to augment the size and enhance the price, rather than add to the value of the work." We will not inflict upon our readers that of which we ourselves complain. We shall pass over the well-known and oft-repeated particulars of the practice of "Galen, the cotemporay of Antoninus Pius, the 16th Roman Emperor," the chapter on the different species of cataract, and that on the removal of cataract by couching and extraction, with one single observation on the latter. It appears to us that the difficulties and dangers of couching and extraction, are not so great in the hands of a skilful operator, as they are represented by Mr. Stevenson. Neither do we admit that the number of cases to which any one of the several processes of the operation by displacement is applicable, "is very limited." Cases do occur in which the usual operations are not applicable, but they are very rare, comparatively, to those in which success may be obtained. —The 4th chapter "on the advantages resulting from the removal of the different species of cataract, at an early period after their formation, by the absorbent practice" merits attention. Mr. Stevenson observes, that however "dissimilar the mode of performing the several operations, they have all been reserved for that stage of the ailment, when the sight has become greatly impaired or wholly destroyed." He, on the contrary, recommends the removal of the cataract as "soon as its character is sufficiently disclosed to enable us to decide upon the real nature and tendency of the disease." The main object in conducting the mode of treatment termed the absorbent practice "is to comminute with a proper needle, the opaque crystalline, or tear its capsule, when it is morbidly affected, into small shreds or filaments, in order that they may in these states more readily undergo the process of solution in the aqueos humour, or be acted upon by the absorbents, whilst, at the same time, the smallness of their size tends to obviate pressure and consequent irritation of the adjacent parts." In other words, the patient is to be couched *at an early period of the disease*, and by this mode of proceeding, whatever disadvantages might arise from allowing the cataract to remain unmolested for an indefinite time will of course be obviated. The suggestion is valuable. To confirm the superiority of the plan recommended, Mr. S. observes, "if the proposed operation be undertaken at the early period I have so strongly recommended, and *before* any central nucleus has formed, I am enabled to speak from reiterated and far more extensive experience in these cases than has fallen to the lot of any other person (who being unacquainted with my views on the subject, has never adopted the practice inculcated in these pages) that inflammation is so *rare* a contingency when my needle is used with the requisite delicacy and address, or in the event of its taking place is so easily removed, as to give no cause for uneasiness or apprehension. In confirmation of this fact, were it not deemed superfluous, I could produce cases, in number, adequate to fill a volume." If the first 138 pages of Mr. Stevenson's book had been omitted, the contents of which are to be found in many other authors, and a part only of these cases had been given to us, and to the profession at large, the work would have been more satisfactory, and its object more fully achieved. Mr. Stevenson's experience has convinced him "that by operating at an *early* period after the formation of cataract in one eye, the *commencing* disease in the other has, in some instances, been immediately arrested; whilst, in several, the organ, in which the opacity had made greater progress, so perfectly regained its former pellucidity and healthy function, as to render an operation in that eye altogether unnecessary."

Mr. Stevenson, we presume, is aware of the advantages of an imposing title-page. Judgment is not unfrequently passed both upon books and men without a perusal of the interior. The contents of a title-page however are sometimes as deceptive as the features. "To render unnecessary the operations of couching and extraction" is the principal intention which strikes the eye in the title-page of Mr. S.'s book. The sum and substance of the work itself, however, is simply to *recommend* the operation of couching at an early period of the disease.

It is true the lens is not *depressed*, but when the cataract is punctured and disturbed in the manner proposed by Mr. Stevenson, the term couching is extended to the operation. Mr. Saunders performed it with success upon many children, and oculists are frequently satisfied by the mere disturbance and comminution of the lens. We read every production of Mr. Stevenson's with a *disposition* to commend. The volume before us might furnish sufficient matter to constitute an interesting article in a Medical Journal, but some ingenuity has been required to stretch it into a book of 234 pages.

The object of Dr. Bowen's book is to recommend an operation which he denominates hyalonyxis, or vitreous operation in every species and variety of cataract.

The *term* hyalonyxis is the property of Dr. Bowen; the operation itself has been long known and practised notwithstanding some of our cotemporaries have awarded the merit of its introduction to him. Dr. Bowen's success has certainly been great. In one hundred and sixty cases performed by him, general bleeding was only required three times, and *no* case of secondary membranous cataract occurred. Dr. Bowen presumes he has first suggested,—

1st. To penetrate the sclerotic far backwards. To prove that this is no novelty, see Sharp's Plates in Surgery, and Mr. Guthrie's observations on the subject.

2d. To dilate the pupil previously to the operation.

This expedient to facilitate the subsequent steps of the operation is well known and generally practised. In a letter written by Scarpa to our friend Mr. Briggs, the indiscriminate application of belladonna previous to operating upon the eye is deprecated. No reason however is assigned for the objection by this able and intelligent surgeon.

3dly. The manner of destroying the capsule.

A reference to Mr. Guthrie's book, will show that he has always done it in the same manner. The success of Dr. Bowen is highly creditable to his operative dexterity. To novelty he has no claim.

XI.

A Treatise on the Puerperal Fever, illustrated by Cases, which occurred in Leeds and its Vicinity, in the Years 1809—1812. By WILLIAM HEY, Jun. Member of the Royal College of Surgeons in London, and Surgeon of the General Infirmary, and of the House of Recovery, at Leeds. pp. 238.

IN spite of the attention which has been paid to the subject of puerperal diseases within the last few years, we are persuaded that there is no department of physic so defective at this very moment, or which so imperatively demands a renewed investigation. The subject must be again taken up; the symptoms must be accurately noticed, and accurately compared with the effects of remedies, and with the morbid appearances in fatal cases, before the confusion with respect to the diagnosis, and the difference of opinion with respect to the mode of treatment, which have so long prevailed, and which still prevail, especially in regard to what has been called "the puerperal fever," can be removed. For want of such an inquiry as this, cases, totally different in their nature, have been considered and treated, and even published as the same. We do not think the excellent Treatise of Mr. Hey even, quite free from this charge, although few medical works have appeared to us to display so much candour, and so much of the real spirit of inquiry and love of truth.

In all the late publications on puerperal fever, the cases treated have been too hastily and indiscriminately considered to be *the same;* and very frequently their authors do not appear to have imagined, that a difference of opinion respecting their nature could exist in the breasts of their readers, and have, therefore, scarcely thought it necessary to enter into that accurate and minute detail of symptoms which alone could remove such doubts, should they exist. This charge we fear is also, in some degree, imputable to some of the cases treated and given by Mr. Hey.

The profession is still in want of a treatise, the principal object of which should be to trace these distinctions in the nature and characteristics of the various and different puerperal diseases; we still want a treatise on these diseases conducted on the basis of *morbid anatomy*, in conjunction with the principle just alluded to. Perhaps the chief defects of Mr. Hey's work have arisen from the total absence of *post mortem* examinations.

Notwithstanding the observations which we have thus made, and which we may hereafter make in our *analysis of the cases* contained in Mr. Hey's work,—our main object in this review,

—we still regard this gentleman's treatise as forming a most valuable addition to our stock of information on the subject of puerperal diseases; and we think no one can rise from its perusal without feelings of the utmost esteem for its author.

Before we proceed to the immediate object of our reviw, as just stated, we propose to make such preliminary observations on the differences *existing* in the nature of puerperal cases, as may, like so many rallying points, assist us in our progress, and our readers in apprehending the scope of our arguments. We conceive then that the most common of all puerperal cases, are those which arise out of the state of the bowels; these cases have been slightly noticed by Mr. Burns and Dr. Granville, as intestinal fever,—and by Dr. Marshall Hall, in an express treatise on the subject, as intestinal irritation; the affection is constantly mistaken for peritonitis. The second class of puerperal cases, in the order of their frequency, is that of inflammations,—and they may be divided into the more diffuse inflammation of the peritoneum, and the more confined inflammation of the *substance* of the uterus and its appendages, and of their peritoneal covering. In the third place, we have very frequently to observe the effects of loss of blood, either induced by uterine hæmorrhage or from the use of blood-letting,—a subject scarcely noticed in any treatise except the little brochure by Dr. Hall, already mentioned. In the fourth place, we are constrained to draw the attention of the profession to the numerous examples of *mixed cases*, a subject, to the practitioner, of the utmost importance,—from their constant occurrence in practice, from their often puzzling character, and from the total silence on such cases in all systematic treatises. Lastly, we come to the subject of epidemic puerperal fever,—and it would be well, we think, for many mothers, if we had sufficient influence with the profession, to abolish the name entirely from our books, substituting the term epidemic puerperal peritonitis for one well-ascertained form of it—and any other appropriate term which a careful investigation of the subject might render necessary for other forms;—for we still consider this matter as *sub judice*, and would hesitate to determine whether *every* case of *epidemic* puerperal disease, be in fact inflammation of the peritoneum; and we would, in an especial manner, remind our readers, that during an epidemic puerperal peritonitis, cases of a sporadic and different nature may and do occur.

There is still another view to be taken of puerperal diseases. For they sometimes affect the *head* entirely, sometimes the *abdomen*. What is the separate nature of these affections? It has been usual to speak of puerperal *phrenitis*: and doubtless such a disease may occur, just as pleuritis may occur, in the puerperal state; but we are satisfied that it is a far more rare puerperal disease than has been formerly, at least, supposed. All the symptoms generally considered to characterize phrenitis, occur from intestinal irritation, and some of them from loss of blood. There is, besides that peculiar disease—puerperal delirium. All these cases must be distinguished from phrenitis. On the subject of abdominal affections we need not say more than we have already done, our present object being not to treat fully of these affections, but merely to throw out a few hints for the better understanding of our subsequent remarks. For the same reason, we omit for the present any thing more than a mere allusion to those diseases—chiefly convulsions and apoplexy—arising from the pressure of the gravid uterus and of a loaded intestine, before delivery, and from the efforts of delivery itself—and to some other affections occurring in the puerperal state, but obviously distinct from the subject of the treatise before us, to which we must now return.

The Leeds epidemic is supposed to have spread itself, with some intermissions, over the years beginning with December 1809, and ending with the latter end of 1812, Mr. Hey has, however, added in an appendix several cases of puerperal disease which occurred in 1814. Some of Mr. Hey's cases are altogether defective in regard to the symptoms;—others are full and ample, and enable his readers to judge for themselves, in some degree, of their nature; with these we shall now occupy ourselves, and earnestly request the attention of our readers to a variety of remarks to which they have given rise.

We transcribe Mr. Hey's first case.

"The first case which occurred in my practice, was that of a young married lady, who resided in an open and healthy situation at a little distance from the town. She was safely delivered of her first child, after an easy and natural labour, in the evening of the 9th of December, 1809; and remained quite well till the afternoon of the 11th, when she was seized with a rigor. I visited her soon afterward, and found her in a state of perspiration—pulse at 120, and not full. She had so little pain in the abdomen, that, had I not been minute in my inquiries, she would not have noticed it; pressure on the hypogastric region did not excite much uneasiness.

"Though the slight degree of pain in this case might have tended, under other circumstances, to mislead my judgment, I was not unsuspicious of the nature of the disease; my attention to it being particularly excited by the recent death, in child-bed, of two ladies in the suburbs of Leeds.

"My father had long been in the habit of treating cases of puerperal fever in a manner somewhat similar to that which Dr. Denman recommends. After freely evacuating the bowels, and occasionally drawing blood from the arm, he prescribed such a dose of some saline purgative, to be taken every morning, as might procure four or five stools in the course of the day; and endeavoured in order to recruit the strength of the patient, to gain a respite at night by administering an opiate.

"By regularly pursuing this plan, I have seen some bad cases of puerperal fever cured, in which the pulse was at one hundred and forty, or upwards, and the abdomen considerably enlarged. The same treatment has been alike successful, when, in the course of the disease a spontaneous diarrhœa has arisen; with this difference only, that a similar dose of purgative was usually sufficient, in proportion to the length of time and degree, in which the diarrhœa had subsisted. Though sometimes the diarrhœa, being in a great measure the effect of irritation, was rather moderated than increased by a proper dose of some mild purgative.

"I saw nothing in the case under consideration to forbid a similar treatment. Venesection did not appear to be indicated; but recourse was had to cooling purgatives, salines, and opiates, as the peculiar circumstances of the case seemed to require.

"The treatment was, in the first instance, attended with all the success that I could wish; the uneasiness in the abdomen was removed, the pulse came down between thirty and forty strokes in a minute, and I had the best hopes of my patient's recovery.

"But I had not yet learnt the intractable nature of an *epidemic* puerperal fever; for this remission, in accordance with a remark of Dr. Gordon, proved 'only a respite, during which, the disease is preparing strength to return again, in order to renew the conflict with redoubled vigour, when it will not be in the power of art to check its impetuosity.'*

"After a few days, the pain, which before had been trifling, returned with greater severity, and the abdomen became sore and tumefied. Purgatives and opiates were again employed, and the former with evident and repeated advantage.

"My father frequently saw this patient with me; a physician was also requested to assist us with his advice; and, before the termination of the disorder, a second physician was consulted; but all was in vain. Notwithstanding the various checks which the complaint received, every remission was less complete than the preceding, and every fresh attack more severe. The pain and swelling of the abdomen increased; an obstinate diarrhœa came on, in which the stools were sometimes dysenteric, sometimes feculent, but watery, and generally accompanying the paroxysms of pain, which for a time was always diminished by them. The lochia were sometimes nearly suppressed; at others, they appeared afresh. The faculties continued clear, and the tongue moist, till within a short time of the fatal termination of the disease, which happened on the tenth day.

"Next to the obstinacy of the disorder, nothing was so remarkable in this case, as the relief procured by purgatives, which was such as to give us the hope, more than once of a favourable issue; and the use of them, I doubt not, prolonged the life of the patient many days. For, whenever, through fear of the strength being exhausted, or from an idea that the diarrhœa constituted a part of the disorder, any attempt was made to restrain it, an increase of the pain invariably followed; on the contrary, when the purgatives were repeated, some abatement of pain was the consequence, sometimes even before they operated. Cinchona and cordials were prescribed towards the close of the disease; but without any advantage." 40.

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* "Treatise on the Puerperal Fever, p. 86."

We think there can be little doubt but that this case was one of *peritonitis;* and we are not surprised that without bloodletting any treatment should be unavailing; the treatment adopted is applicable to another form of puerperal disease. It is observable that the *head* was not affected: and we notice this particularly, because we believe such affection frequently denotes a case different from simple peritonitis, in which latter disease it is plainly not *essential.*

The fourth and fifth cases are also evidently inflammation. The sixth is given by Mr. Hey as a fair example of the disease, and we therefore copy it. It is to be remarked, that the tongue, skin, and head are not affected.

"Mrs. W—— was brought to bed of her eighth child on the 26th of January 1810, at midnight. Her labour was natural, and rather quick; and was attended with a moderate and proper discharge. She was affected with after-pains for a few hours after delivery, which then left her, and she remained easy.

"Being desirous to avoid whatever might prove an occasion of irritation to the abdominal viscera, or cause a determination of blood to them, we purposely abstained, in this case, from prescribing any purgative medicine. At five o'clock *p. m.* on the twenty-eighth, she was found to continue perfectly well. Her pulse was then at 72.

"29th. I was called to visit her at eight o'clock in the morning, and was at the same time informed, that she had passed a very bad night. After suckling her child for some time, she had been seized about one o'clock (forty-nine hours after delivery) with a shivering fit, accompanied with severe pain in the abdomen; and to the circumstance of giving suck *she* attributed her disorder. The pain had returned with great severity at short intervals throughout the night, leaving, during its remissions, extreme soreness in the abdomen. I found the pulse at 120, the tongue clean, and the abdomen very tender, but not enlarged. The skin was cool, and the face pallid. She complained of thirst. About six o'clock she had experienced some degree of nausea. I ordered a purging clyster to be injected immediately, and a table spoonful of ol. ricini to be taken every two hours, no stool having been procured since the delivery.

"Anxious to afford every assistance to my patients, and unwilling that the whole responsibility should rest upon myself, in these truly alarming cases, I immediately requested a consultation. The physician who was first sent for, being from home, another was called in; but some delay was necessarily incurred by this circumstance.

"*At half-past* 2, *p. m.* I found the patient somewhat easier, and the pulse reduced to 110, though the oil had not yet operated. She had taken three doses of it. The clyster had not been well managed; but the little that had passed, had brought away some hardened fæces.—Another was injected.

"*Five, p. m.* A fourth dose of the oil had been taken at three o'clock; but no stool had been procured, and the last injection was still retained. Some flatus had been expelled *per anum.* An enlargement of the abdomen was now evident, but at what period it commenced I cannot exactly say.

"The physician who saw the patient in the morning, and now met me in consultation, had just witnessed with me the rapid progress of the disease, as related in the preceding case; and, as that was thought to have a stronger analogy to the puerperal fever described by authors as a species of low fever, than to a case of phlegmonous inflammation, it was judged proper to prescribe accordingly.

"The purgative already taken was relied upon for evacuating the bowels, as they had not hitherto been found difficult to be acted upon in this fever, if purgatives were given at the commencement of the disease; and the following medicines were prescribed.

℞. Pulv. cinchon. ʒss. 2da quaque hora sumend. cum coch. iij julep. infra præscr.

℞. Mistur. camphoræ ℥vj.
Liq. ammon. acet. ℥ ij. M.

"I had indeed found nothing so beneficial as purging; but I could say nothing of my success; and therefore could not object to the trial of other and different means.

"*At* 8, *p. m.* the physician who had first been sent for, accompanied us to visit the patient. The swelling of the abdomen had increased, and the pulse was at 120. As but little opportunity had been afforded for the trial of the medicines so lately prescribed, it was agreed that they should be continued. An anodyne fotus, composed of twelve ounces of a decoction of poppy-heads and four of spt. camphoræ, was directed to be applied to the abdomen.

"30th. I visited the patient at seven in the morning. She had passed another very bad night. Since twelve o'clock the pain had become much more severe. She had vomited the medicine at four o'clock, in consequence of which it had not been repeated. The tongue was dry. As no evacuation by stool had been procured, another clyster was injected; and, in pursuance of the plan of treatment which had been adopted, I only ordered a draught with decoct. cinchonæ and thirty drops of the tincture, till I should meet the physicians.

"*At half-past* 9, *a. m.* we saw her together, and found her in no respect relieved. The vomiting continued, and the pulse was at the rate of 130. A saline mixture was directed to be given in a state of effervescence.

"*Two, p. m.* Every thing had been rejected almost as soon as taken. The pain of the abdomen had increased, though its distention was not greater, and the cries of the patient were very distressing. Opiates were given both in a liquid and solid form, but without any advantage.

"*Eight, p. m.* She was becoming delirious, her pulse was not to be felt, and she died the same evening. I do not know the exact time of her death, but it must, I think, have been within forty-eight hours from the attack of the disease." 62.

In the third case there were heat of the surface, and a white tongue, and the head was affected, after a violent rigor, symptoms which frequently concur in the same case, and which have appeared to denote the addition of intestinal irritation to the state of inflammation.

In the seventh case, inflammation seems to have begun and to have subsisted for three months before delivery, in spite of laxatives, opiates, and bleeding. It is to be regretted, that Mr. Hey has not specified in what measure these remedies were employed; and it is almost surprising that active antiphlogistic means were not resorted to in this case, at least, both before and after delivery. The case is extremely interesting in every point of view, and we cannot do better, we think, than transfer it to our pages.

"Dr. Denman observes that there are instances of puerperal fever being formed before delivery. I have mentioned one such instance,* in which the patient was attacked with the symptoms of it a few days before labour, and died within twenty-fours after her delivery. I have also alluded to the following case, in which there appeared a strong predisposition to the disease during the latter part of pregnancy.†

"For nearly three months before her confinement, but more especially during the last five or six weeks, Mrs. K—— suffered much from very unusual pains in the abdomen. She was seldom quite easy; and every day she had one or two paroxysms of severe pain, which continued several hours. They came on at different and uncertain times, and affected chiefly the hypogastric region, but sometimes the epigastric. They were often alleviated by rest in a horizontal posture, though not unfrequently they came on in bed; but when the pain was most subdued, it left the abdomen very sore. Laxatives, opiates, and bleeding, were the principal means tried for its relief, but with little success.

"February 5th, 1810, in the evening, she was delivered of her first child, after a lingering, though not a severe labour, of three days. During the two first, the pains were slight, but distressing in consequence of the soreness of the abdomen. On the third day, the labour was more natural, and less distressing. I frequently visited her, but only remained by her during the last two hours. On the morning of this day, the pulse was at 72; after delivery, at 100.

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* See p. 26.

† Ibidem.

"6th. She had passed the night without much sleep, having had frequent pains resembling after-pains, and, in the intervals, great soreness of the abdomen. The uterus was easily distinguished reaching nearly to the navel, and showed great tenderness when touched. She had much difficulty in turning herself in bed. She complained of thirst, but had not much heat. The tongue was rather white and furred. Pulse at 80. I forbad every thing heating in diet, and ordered a draught to be taken immediately, containing rhubarb and tartarized soda, of each a dram.

"*Half-past* 2, *p. m.* The pain and soreness of the abdomen had rather increased, and the draught not having operated, a mild clyster was injected. Pulse at 98. I prescribed a saline draught with vin. antimon. gutt. x, to be taken every two hours.

"*Half-past* 6, *p. m.* A very copious stool, containing much solid fæces, had been procured, and the pain was greatly diminished. Pulse at 108.

"*Ten, p. m.* The pain had become more severe again, shooting into the hips, thighs, and even to the toes; the soreness of the abdomen, and the difficulty of moving had also increased. As she had had but one small additional evacuation, I ordered another draught with magnes. sulphas and manna, āā ℥ss, to be taken immediately; and the saline draughts to be afterward continued with the addition of ten grains of pulv. ipecac. comp. to each of the two first.

"7th. She had got no sleep in the night, except half an hour since six o'clock. Two pretty copious stools which she had in the night, were of a dysenteric kind, and contained no fæces. The fur of the tongue was partially cast off in the middle. The state of the abdomen remained throughout the day much the same as before. The intention of endeavouring to excite and keep up a gentle diarrhœa, was still pursued; and the opening medicines were varied in their kind and dose, as the symptoms seemed to indicate. About noon a vomiting came on, which was removed before night; and, good evacuations by stool being also procured, the patient felt much relieved. A fresh discharge of lochia took place during the day. The pulse was at 130 both morning and evening. A saline draught with thirty drops of tinct. opii, was ordered to be taken at bed-time; and a saline mixture, at intervals, in a state of effervescence.

"8th. She had passed a pretty comfortable night, and had slept a good deal. Pulse at 112. The purgatives to be continued.

"*Four, p. m.* Four or five small natural stools had been procured; and the pain, swelling, and soreness of the abdomen, had much abated. The tongue was clean in the middle. An habitual cough, which seemed, from the period of labour, to aggravate all the other symptoms, still continued very troublesome, and was attended with a large expectoration of frothy phlegm. Pulse at 120.

"I was sent for between seven and eight o'clock in the evening in consequence of a fresh attack of vomiting. She complained of soreness and a sense of fulness in the pudendum, which induced me to examine the parts; when I found a patch of erysipelatous inflammation on each of the *nates*, and an œdematous enlargement of the *labia pudendi*. A fetid ichor was discharged from the vagina. The urine was generally forced away by the cough, which might tend to increase the inflammation. The following medicines were prescribed.

℞. Decoct cinchon. ℥iss.
Ammon. carbon. gr. v.
Tinct. opii. gutt. x. M. fiat
haustus statim sumendus, et, horis duabus elapsis, repetendus cum tinct.
opii gutt. v.

"*Half past ten, p. m.* The first draught had been taken, and the vomiting had ceased. The pulse was at 134; but it was probably quicker in consequence of the patient having just been moved. The draughts were ordered to be repeated every two hours, with three drops of tinct. opii in each; and a table spoonful of wine to be given now and then. A cooling ointment was prescribed for the inflammation.

"9th. She had slept some hours in the night, and all the symptoms were relieved. Pulse at 106. Tongue cleaner and more moist.

"*Evening.* In the afternoon the cough had become more troublesome, and was accompanied with a darting pain in the abdomen, the swelling and hardness of which had increased. The vomiting also had returned. An opening draught had procured two natural loose stools, and the vomiting was relieved, but the pain continued the same. The erysipelas had become more extensive, and the patient was hot and restless. Pulse at 120. Two grains of opium were ordered to be given with an interval of four hours, and the draughts to be continued, with the addition of a teaspoonful of lemon-juice.

"10th. A considerable remission of the symptoms had again taken place in the night. The skin had become cool, and the tongue cleaner. The pulse was soft, and beat no more than a hundred strokes in a minute. This truce, however, was not of long duration; the pain and vomiting soon returned, the distention of the abdomen increased, and before night the pulse got up again to 120.

"From this time the disease made a regular progress without any material remission. Cordials, anti-emetics, and opiates were administered with little effect. The erysipelas continued to spread, and the vomiting, pain, and distention of the abdomen, grew worse and worse; till, on the evening of the twelfth, just seven days from the delivery, death put a final period to them. The tongue had become quite clean, and, if the patient was at all delirious, it was not until very near the fatal close of the disease.

"We are informed that, in the Puerperal Fever of Aberdeen, 'a very frequent crisis of the disease was by an external erysipelas;' and that 'one of the most favourable symptoms is an erysipelas on the extremities, or abscesses on different parts of the body; for such are certain

signs of a salutary crisis.' I never met with an instance of either critical erysipelas or abscess, in the Epidemic at Leeds ; nor do I recollect any case, except the foregoing, in which erysipelas appeared at all. In this it was unfortunately not critical." 69.

The eighth case is full of interest, and we copy it both on that very account, and for the sake of the observations which we have to make in regard to it.

" Mrs. N————, residing at a solitary house in the country, about three miles from Leeds, was brought to bed in the night of the 7th of February, 1810, after a short and easy labour. She was a middle-aged woman, and had borne many children. On the ninth, I gave her a gentle laxative which had the desired effect. On the morning of the tenth, I found her sitting up to suckle her child ; she seemed unusually well, and so she remained till the end of six days.

" 14th. I was called up at one o'clock in the morning to visit her, and was informed that, having gone to bed quite well, she was seized at eleven *p. m.* with a shivering fit, which was succeeded by a great degree of heat, and pain in her body (shooting also into her hips and thighs) resembling labour-pain, but continuing without any perfect intermission. She complained also of much pain and throbbing in her head. Though the heat had begun to abate before my arrival, the skin was still hot and dry ; but soon afterward a profuse perspiration succeeded. The tongue was furred and very white ; and the pulse beat at the rate of 150. The breasts were flaccid, and I desired that the child might not be allowed to suck. The abdomen did not show any tenderness upon pressure. The lochia had returned afresh on the preceding morning, and in the evening she had had a natural and easy stool.

" The want of success which had hitherto attended the treatment of the disease, induced me immediately (though it was night) to consult with my father on the management of this case. We were satisfied that no remedy had done so much good as purging, yet it had not proved sufficient for the cure of the disease. We therefore thought it proper to add such means, as might tend to allay the local irritation, without much interfering with the operation of purgatives. With this intention, we ordered a draught with rhubarb and tartarized soda, of each a dram, to be taken immediately ; a small clyster with forty drops of tinct. opii to be injected ; a large blister to be applied to the abdomen ; and a saline draught to be taken every two hours.

" *Half past two, p. m.* The pain had somewhat abated before the medicines arrived. After the injection of the opiate, it had gone off entirely, and had not returned. A slight vomiting had come on after taking the purging draught, and probably a part of it had been rejected. A degree of chilliness succeeded by heat, had returned about one *p. m.* Pulse 126. I prescribed the following mixture :

℞. Sod. tartariz.—mannæ, āā ℥ss.
Tinct. senn. ʒij.—Aq. fervent. ℥ij.
Sumat tertiam partem alternis horis ;

and ordered a domestic clyster to be injected. I took off the blister, which by mistake had been applied to the back.

"*Nine, p. m.* Two doses of the mixture had been taken, and had procured three loose feculent stools. A degree of nausea had once been felt after taking some broth. Pulse at 134.

"15th. *Half-past one, p. m.* The patient had passed a very comfortable night, and had slept a good deal. She remained free from pain and soreness in the abdomen; and the secretion of milk seemed to be returning in the breasts. The tongue was cleaner. Pulse at 104. She had had one copious stool of solid fæcis in the night, but none since that time. The saline draughts were ordered to be taken every four hours, and the purging mixture in such doses as to keep open the bowels; also a clyster to be injected in the evening. A table spoonful of wine in gruel was allowed to be given now and then.

"16th. The injection had produced two plentiful stools containing large lumps of solid fæces. The patient complained of more pain in her head, and her tongue was furred. Pulse at 96. The medicines were ordered to be continued; another clyster to be injected in the evening; and the feet to be immersed in warm water.

"17th. *Four, p. m.* Notwithstanding a pretty good night, she had not been so well this morning. The pain in her head continued; and she had several times experienced an acute shooting pain in the region of the uterus, which did not remain, but had produced some degree of soreness in the abdomen. She complained of thirst; the tongue was a good deal more furred, and the pulse at 104. Several loose evacuations had taken place the preceding evening, but none after nine o'clock.

"Ordered, the opening draught to be given immediately; and the clyster in the evening, if the draught should not operate before nine o'clock. The patient having taken a dislike to the saline draughts, the carbonate of potass with lemon-juice, to be taken in a state of effervescence, was substituted in their place.

"18th. The opening draught and injection had failed to operate. The abdomen was distended and hard, but not painful. Some degree of nausea had come on in the night, but had not produced vomiting. The skin was cool and pallid. The tongue was covered with a brown fur, and the pulse was at 112. A repetition of the clyster and opening medicine was directed.

"*Six, p. m.* A copious stool had been obtained, containing a good deal of mucus; and much flatus had been expelled *per anum*. The abdomen was soft, easy, and considerably reduced in size. Countenance good. Pulse 114.

"19th. The patient had passed a very good night, and was in all respects better. The pain in the head and abdomen, and the enlargement of the latter, were quite gone. The fur of the tongue was coming off, and the pulse was at 98. A clyster had been injected, and had procured a proper evacuation.

"About noon, she was seized with a cold fit, scarcely proceeding to a rigor, which was succeeded by great heat, a very frequent pulse, and pain in the head. A second clyster was injected, which operated and gave sensible relief. I ordered an opening draught to be taken in the evening, and the clyster to be repeated if necessary.

"20th. The draught and injection had both been given, and an evacuation procured by each, containing lumps of hardened fæces, which had the appearance of having remained in the bowels for some time, and had probably been the cause of the cold fit. The head was quite relieved; the fur was cast off from the tongue; and the pulse was reduced to 90. As there was some appearance of languor, a table spoonful of wine was directed to be taken frequently in some nourishing liquid.

"21st. No complaint, except soreness of the tongue and fauces, which were affected with aphthæ.

"On the 22d, the patient, having been rather longer than usual without a stool, was again attacked with chilliness succeeded by heat, but in a much less degree than before. She was relieved by an injection; but this attack occasioned her a restless night.

"From this period, she recovered without any relapse; but was some time in regaining her usual strength, on which account she took various tonic medicines." 76.

It is to be remarked, that on the first day there were, in this case, rigor, great heat and dryness of the surface, much fur and whiteness of the tongue, and much pain and throbbing of the head, whilst the abdomen was free from tenderness on pressure; and again "chilliness succeeded by heat." On the next day, the abdomen "remained free from pain," and solid fæces had been passed. On the third day, "large lumps of solid fæces" were passed, and there was "more pain of the head," but still no mention of pain in the abdomen. On the fourth, an acute shooting pain in the region of the uterus is first noticed; on the fifth the "abdomen was distended and hard but not painful;" and in the evening, "soft, easy, and considerably reduced in size." On the sixth day the pains and enlargement of the abdomen were quite gone; in the evening there were rigor, great heat, frequent pulse, and pain of the head,—greatly relieved by a clyster; and on the succeeding day the patient passed "lumps of hardened fæces, which had the appearance of having remained in the bowels for some time."

We have been thus minute in our account of this case, because we are quite certain that it was *not* a case of puerperal fever or peritonitis. There is scarcely a symptom of abdominal inflammation; but there is every symptom and every kind of evidence of intestinal irritation and its effects, as described by Dr. Hall. The patient recovered, too, without the use of the lancet. All the previous patients had died under the same neglect of this all-powerful and all-essential remedy of inflammation. In the present case, too, the attack and the symptoms, such as they were, were severe; and we think that had they been inflammatory, nothing but the lancet could have saved the patient. But it is our office to give hints only, and we recommend and leave the case to the earnest consideration of our readers.

Not less instructive is case the ninth.

"June 18th, 1810, I was sent for to Mrs. B———, a stout middle aged woman, living at a little distance from the town, who had borne several children, and was then in labour. The early part of the labour proceeded quickly, but the pains declining in strength, the latter part was slow. The placenta separated spontaneously, and was expelled by the natural efforts; but the uterus did not contract well afterward, which occasioned too great an effusion of blood. However, by keeping up a compression with the hand on the fundus uteri for about an hour, the hæmorrhage was considerably restrained, and I left my patient apparently doing well.

"In about an hour, I received an urgent call in consequence of a fainting; and found the uterus much distended with blood. I removed the coagula from the vagina; and, by gently stimulating the os uteri with two fingers of one hand, and compressing the fundus with the other, a good contraction was produced, and the hæmorrhage ceased. The patient remained languid, but had no more fainting. Pulse 120.

"19th. No complaint but languor arising from the loss of blood. Pulse the same.

"20th. The strength had improved, but the pulse had rather increased in frequency. Ordered a gentle laxative.

"21st. *Eleven, a. m.* The laxative had procured three good evacuations, two of which were loose. The pulse had come down to ninety-six, and was full and strong. I observed the tongue to be dry in the middle.

"*Three, p. m.* Not long after my visit in the morning, the patient had been affected with a slight chilliness, which was succeeded by heat, vomiting, and a continued, though not violent, pain in the abdomen. She complained of soreness, when the abdomen was touched; and the uterus, somewhat enlarged, was distinctly to be felt above the pubes. The skin had now become cool. I directed a purging clyster to be injected immediately, and a saline mixture to be taken every two hours in a state of effervescence.

"At this time I had not seen Dr. Gordon's Treatise on the Puerperal Fever of Aberdeen; for it was not much known in Leeds. But I had read the short account of it contained in Thomas's Modern Practice of Physic; and the last case which had occurred to me, having exhibited evident marks of acute inflammation, I was strongly inclined to make trial of bleeding. This inclination was strengthened by reflecting on the small success which had hitherto attended all other means; and still more so by the consideration, that purging, the other principal remedy of Dr. Gordon, was the only one from which I had seen clear and decided advantage. Unfortunately the present case was not favourable to the trial, the patient's strength having been previously reduced by a profuse hæmorrhage. No time, however, was to be lost; I determined therefore to repeat my visit soon, and to be guided by circumstances.

Five, p. m. The clyster had been given an hour and was still retained. The vomiting had not returned. The pulse was at 112; and as it was by no means a weak pulse, I determined to take a small quantity of blood from the arm, and to observe its effect. I took away seven ounces, and also applied a large blister to the abdomen.

"*At Eight, p. m.* My father visited the patient with me. She had parted with an astonishing quantity of fæces mixed with mucus. The pain came on at intervals, like after-pains; and was very moderate in the remissions, when she lay quite still upon her back; but the least motion of the body occasioned great uneasiness. The blood exhibited a very thick inflammatory crust, and the crassamentum was remarkably firm. The pulse was at 130, and hard. Under these circumstances, it was judged proper to repeat the bleeding to the same quantity.

"*Ten, p. m.* The second quantity of blood was not covered with so thick a crust, but the crassamentum was still more firm than the former. It was like a piece of liver; I could scarcely pierce it with my finger. The pulse had come down to 120, and was more full. She was lying upon her side, which she had not been able to do before, and was quite easy when at rest. She had complained all the day of great thirst. The tongue was clean, but still dry in the middle. A saline draught was ordered to be taken every three hours, and, as she had had several more loose stools, thirty drops of tinct. opii were added to the first.

"22d. Throughout this day the pains were slight and distant, and their remissions almost complete, so that the patient could bear to take her nourishment sitting up in bed. The tongue was moist and clean. Some opening medicine being necessary, a dose of rhubarb and calomel was given, and the clyster repeated. By their joint operation a surprising quantity of fæces was again discharged in the evening. The pulse was below an hundred in the morning, and in the evening at 116. As she had perspired a good deal, and appeared languid, the saline draught were directed to be made with an ounce of decoct. cinchonæ. The anodyne was repeated.

"23d. She had passed the night without any pain, notwithstanding which she had slept but little. Pulse at 110, and very strong. No more stools: clyster repeated.

"Having augured favourably of this case from the gradual and complete cessation of pain, it was with no less surprise than regret, that, in the evening, I found an entire new train of symptoms. The patient having been affected throughout the day with an irresistible propensity to sleep, from which she got no refreshment, awoke in the evening with pain in her head, accompanied with giddiness and ringing in the ears. Her face was flushed: her pulse at 132 and strong. She had had three loose stools, and had parted with a large quantity of urine. Some leeches were ordered to be applied to the temples; but finding, on a second visit, they had not been procured, I took three ounces of blood from the temporal artery. The saline draughts were directed to be made without decoct. cinchonæ, and a blister to be applied to the nape of the neck. Just before the bleeding the pulse was at 120, after it at 112.

"24th. I found the patient sitting up in bed to take some refreshment. She had slept several hours in the night. Her countenance was good. It was rather singular, that the left side of the head, from which the blood had been taken, was easy, but the opposite side painful. The crassamentum, as before, was extremely firm. Pulse 126. I took three ounces of blood from the temporal artery of the right side, and the evacuation greatly diminished the pain.

"In the evening she experienced a seizure somewhat similar to that of the preceding day. Having been visited by several friends, who had inconsiderately talked and read a good deal to her, she was suddenly affected with a sense of great confusion and noise in the head, accompanied with much heat and flushing of the face. Pulse 140. In consequence of the relief before experienced, she was very desirous to lose some more blood from the temples, and therefore, though the pulse appeared less strong, I took an ounce and a half from the temporal artery.

"The case having become more alarming by this relapse, a consultation was requested; and a physician who had attended several of these melancholy cases with me, was called in; my father also visited the patient with us. The pulse had come down to 120, and was evidently fuller since the bleeding. The crassamentum was as firm as before. It was agreed that the saline draughts should be continued, that a blister should be applied to the head, and the temples and forehead be frequently bathed with cold vinegar and water.

"25th. *Eight, a. m.* She had had no sleep in the night, but her head was rather more composed, and she was free from heat. Pulse 116. Some indications of a paralytic affection were now apparent. She faltered in her speech, and her tongue when put out, was drawn to one side. At noon the pulse got up to 140, she took little notice, and, though she sometimes spoke coherently, an answer to any question could scarcely be obtained from her; her mind also appeared much agitated.

"*At Four, p. m.* the physician met us: it was agreed that a little wine whey should be given frequently, and the following medicine was prescribed;

℞. Spt. æth. comp. gutt. xxx.
Spt. ammon. comp. gutt. x.
Aq. puræ ℥iss. M.
fiat haustus tertia quaque hora sumendus.

A draught with fifteen drops of tinct. opii was also directed to be taken at bed-time.

"26th. The night had again been passed almost without sleep; but the head was free from pain, confusion, and the sense of ringing. Pulse 116.

"*Two, p. m.* After three hours comfortable sleep, the head was not so well. The bowels were open, and the stools natural. Pulse 120.

"27th. I was not able to see the patient myself on this day, and I neglected to minute any account of its occurrences.

"28th. She had had no sleep in the night, and was very restless, with some degree of delirium. We found her incessantly talking, but could procure no answer from her to any question that was proposed. She refused all medicine. Pulse 120.

"In the course of the day the abdomen became tumid from flatus confined in the bowels; the tumefaction was unattended by pain or soreness, and entirely subsided as soon as evacuations were procured by an injection.

"*Ten, p. m.* She was in all respects worse. Her urine came away involuntarily; she had some rattling in her breathing, and appeared to be sinking. Pulse 132. Thirty drops of spt. æther. sulph. were ordered to be given now and then as a grateful cordial.

"29th. We were agreeably surprised to find our patient much better. During the night she had been able retain her urine, and had made a large quantity with proper intervals. She was quite sensible, and more composed; and had regained the power of putting out her tongue, which before she had lost. The pulse was at 106, and the tongue continued clean. Ordered to take at regular intervals a draught of infus. rosæ, made with decoct. cinchonæ, and to have occasionally a little Madeira wine.

"These favourable symptoms did not long continue. In the evening the pulse had got up to 120, and the heat had increased.

"From this time the patient became gradually weaker, her pulse was accelerated more and more, and her urine was again discharged involuntarily. She lived two days in a state of great anxiety and increasing restlessness, and died on Sunday night the 1st of July.

"This case appears to me an instance of a remarkable metastasis of the Puerperal Fever; and had the disease been transferred to a less vital organ than the brain, a more happy crisis would probably have been the result. I have before mentioned that, at Aberdeen, the disease was not unfrequently transferred to the surface of the body, producing an erysipelas on the extremities, which proved a 'certain sign of salutary crisis.' And the transition of inflammatory affections of various kinds from one part of the body to another, is a fact well known in the practice of physic. In the case just related, it is observable, that, while the inflammation of the abdomen subsisted, the head was free from all complaint; and that, as soon as the inflammation was completely removed from the abdomen, to which it never in any degree returned, the head became affected with symptoms of inflammation, accompanied with evident marks of compression of the brain.*

"* *Metastasis propriè dicitur, quando, alio morbo quiescente, translata alio materia novum morbum excitat.*"

"Whatever other conclusions may be drawn from this case, the entire removal of the abdominal affection, and the appearance of the blood, which was of a firmer texture than any I had ever seen, both tended to confirm me in the propriety of bleeding in the disease under consideration." 91.

This case is of a *mixed* character. We are far from regarding it as one of pure puerperal peritonitis; we even doubt whether there was any peritoneal inflammation at all; but there can be no doubt but that there were intestinal inflammation, and some of the effects of loss of blood. The case began with shivering, succeeded by heat, and the attack was soon followed by an "astonishing quantity," and, the next day, by a "surprising quantity" of fæces, and by a "complete cessation" of the pain in the abdomen. On the third day an event occurred which is exceedingly common in cases of intestinal irritation, viz. an attack of affection of the head,—pain, with giddiness and ringing of the ears, the face being flushed and the pulse frequent; a somewhat similar seizure was repeated on the succeeding day, viz. "a sense of great confusion and noise," accompanied with much heat and flushing of the face, from mental excitement. Afterward, there were indications of a paralytic affection; in a day or two more, restlessness and incessant talking; "in the course of this day the abdomen became tumid from flatus confined in the bowels; the tumefaction being unattended by pain or soreness, and entirely subsiding as soon as evacuations were procured by a clyster." The patient rallied the next day, became "quite sensible and more composed;" but, few patients recover from a "rattling in the breathing," a symptom which had been remarked the day before, and which is, if accurately observed in its very commencement, among the first, if not the very first of the symptoms of sinking from loss of blood.

We began our observations on this case, by observing that it was one of a *mixed* character. We doubt not that there was intestinal irritation,—we are certain that some of the symptoms arose from loss of blood; whether the affection of the abdomen was inflammation—and what was the nature and the cause of the affection of the head, we will not pretend to determine; but we are far from being of the author's opinion of its being a case of metastasis; we cannot say all that we have thought on this point: but we think it right to observe, that such cases are frequently examples of the varied and successive effects of intestinal irritation. Admitting too that there was serious effusion or other morbid state within the head, this is, as we know, sometimes an effect of loss of blood; a most instructive case of this kind is published by the late Dr. Denman to which we beg to refer our readers.*

The tenth case, which is short, we transcribe for the sake of making one or two remarks.

"Mrs. S.———— was brought to bed on the 15th of July 1810, about nine o'clock in the morning. In her former labours she had been subject to a relaxation of the uterus, after delivery, which usually occasioned a considerable flooding. Her discharge at this time was copious; but, being aware of the tendency to hæmorrhage, I was able, by suitable means, to keep it within moderate bounds.

"On the following day, at three o'clock in the afternoon, I was called to her in haste, on account of an excruciating pain which had suddenly seized the abdomen. It continued for half an hour without remission; but, before my arrival, it had ceased. As the pain was not preceded by rigor, and the pulse was not accelerated, I could not conclude the case to be one of Puerperal Fever; and therefore satisfied myself with prescribing an opening medicine, and requesting to be sent for immediately, if the pain should return.

"Having heard no more from the patient, I visited her late in the evening; and then found that the pain had returned, but with a less degree of severity; and, having had regular remissions, it had been mistaken for the common after-pain, and had therefore created little alarm. The abdomen had become very tender, and the pulse frequent.

"No doubt now remained on my mind of the nature of the disease; and though the attack was less distinctly marked, than in most of the cases which I had seen, my later experience warrants me in concluding, that the disease would soon have proved fatal, had not vigorous means been employed to check its progress. As night was approaching, I feared to wait till the symptoms became more urgent; and therefore, notwithstanding my reluctance to copious bleeding was not quite overcome, I immediately took from the arm a large basin full (about twenty ounces) of blood, and directed a continuation of the purgative. A cathartic clyster was also injected. The pain was diminished, while the blood was flowing, and on the following morning it was nearly gone; the fever had also greatly subsided. The bowels had been freely evacuated, yet I thought it advisable to maintain the purging undiminished for another day; and then it was suffered gradually to abate. The patient recovered without further complaint.

"Thus was an immediate stop put to the disease, which, had the bleeding been omitted, or deferred until morning, would, in all probability, have been irremediable. For though the first attack was, in some respects, less alarming than in many other cases; yet its early period, the severity of the pain, the consequent soreness of the abdomen, and the rapid increase of the pulse, clearly point it out as a genuine, and not a very slight case of the prevailing epidemic. Perhaps the previous hæmorrhage might, in some degree, have obviated its violence." 94.

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* Trans. of a Soc. for Imp. of Med. Knowl. v. 3, p. 315.

We agree with Mr. Hey that this was indeed a case of puerperal peritonitis; and it illustrates, in an instructive manner, an observation we have frequently made, that attack of that formidable malady is *not* necessarily ushered in by severe rigor, the pulse not necessarily very frequent, or the skin very hot, or the head affected. On the contrary, peritonitis is often insidious, detected in its early stages, on a careful examination only, and very apt to be overlooked during the first hours of its existence; in a short time, indeed, the pain and the state of the pulse sufficiently indicate the nature of the disease, and fix the attention of the practitioner; but the loss of that short time may cost the patient's life. We do not wish these remarks to be taken absolutely; in this as in other instances, "nulla perpetua præcepta;" there may be severe rigor,—there may be great heat of skin with inflammation; all we wish to observe is that these symptoms are not constant; and we would just hint, that in many cases, they depend on a superadded cause, and that frequently intestinal irritation. Shivering in a slighter degree, and less followed by the other symptoms, is not unusual perhaps in pure peritonitis.

We have already noticed a case in which erysipelas occurred; in the eleventh case there was mortification of one of the extremities.

Nothing can be more instructive than the other cases given in Mr. Hey's work; the observations made by the author are all along extremely good. He remarks the absence of rigor in some decided cases of inflammation. The observations interspersed on the effects of blood-letting are excellent as applicable in cases of inflammation, and should be read again and again. There is little notice taken of affection of the head in all the cases which are plainly inflammatory. The skin sometimes becomes hot in the after periods of the disease, a circumstance which we have frequently noticed, and which we have sometimes ascribed to the remedies, and Mr. Hey frequently cautions against nursing, the attempt having often been immediately followed by an attack of the disease. We transcribe the twenty-first case, as exemplifying these remarks, and the usual character and remedies of true puerperal peritonitis.

"August 3d, 1812, at one o'clock in the morning, the wife of J. W—— of Hunslet, a woman of rather delicate appearance, was delivered by a midwife of her 12th child, after an easy labour of about an hour. Her discharge both at the time of labour and afterward, was said to be copious, but not excessive. On the following morning she had a shivering fit, which was not, however, succeeded by pain; and she remained quite well throughout the day. The after-pains were slight.

"5th. At four o'clock in the morning, she was suddenly seized, without any previous chilliness, with a violent pain in the body resembling labour-pain, but of much longer duration. It increased progressively during the day; and in the intervals, which were not longer than a quarter of an hour, the abdomen was sore.

"I first saw her between four and five in the afternoon, and found her crying out in pain like a woman in labour. The remissions were now very short. There was little heat in the skin, and the countenance was pale; the tongue was clean and moist; the pulse about 112 and hard. The head was noway disordered. The abdomen was not swelled, nor the uterus distinctly to be felt. Pressure on the hypogastrium excited pain; but not in that great degree which is common in this complaint; and motion of the body was effected with tolerable ease. The child had sucked several times on the preceding day, but only once on this day; and that had greatly aggravated the pain. The breasts were now quite flaccid. The patient had taken some opening medicine, which had produced one loose evacuation in the morning.

"The symptoms, in this case, were not the most alarming, considering that thirteen hours had elapsed since the commencement of the disease; but the pain was violent, and the loss of time was more than a counterbalance to the apparent mildness of the other symptoms. I was therefore satisfied that large bleeding, in the first instance, was necessary; especially as night was approaching, and the patient lived at some distance from me. I first took away twenty-five ounces of blood, without producing any degree of faintness; when I closed the orifice for a few moments, till another basin was procured; and then drew nine ounces more. She was now disposed to faint, and the pain was much diminished. I put my finger on the orifice, and waited awhile. The faintness soon went off, and the pain returned; I therefore took away six ounces more, making in the whole forty ounces. The patient becoming again very faint, I tied up the arm: she soon recovered, and remained easy. Pulse 88. A clyster was injected as soon as it could be prepared, which in ten minutes produced a very copious evacuation of solid fæces. At six *p. m.*, I gave a bolus with half a drachm of jalap and four grains of calomel; and left directions that three table spoonfuls of the cathartic solution should be taken every two hours, till the bowels should be well opened, beginning two hours after taking the bolus.

"*Half-past ten, p. m.* The pain had returned soon after I left her, and with as much severity as before the bleeding. She had had three small watery stools, which did not appear to be the effect of the purgatives. The heat of the skin was now considerable, and was attended with much restlessness. The pulse was at 120, and still hard. The tongue was rather white, and the abdomen was much more tender; particularly in the region of the uterus, which had become enlarged, and easily distinguishable. This increase of all the symptoms since my former visit seemed not only to justify the quantity of blood then taken; but to require a further evacuation. I tied up the arm, and took eight ounces from the same orifice; when, the patient growing faint, I desisted. The pain was much alleviated by this second bleeding, and the pulse came down to 84. I ordered the solution to be taken every hour.

"6th. *Eight, a. m.* She had remained nearly free from pain all the night; the soreness had greatly abated, the uterus was diminished in size, and she had slept several hours. The skin was moist and of a natural heat; the pulse at 100. She had taken above two ounces of magnes. sulphas, besides the purging bolus; and had had many small evacuations, which, however, contained but little fæces. Two boluses were therefore prescribed, with fifteen grains of jalap and two of calomel in each, to be taken with an interval of two hours; and the solution was ordered to be afterward continued.

"*Six, p. m.* Both the boluses had been taken, and the remainder of the third ounce of magnes. sulphas, which had procured a great number of natural stools. The patient continued free from pain; the soreness of the abdomen was quite gone, and the uterus was scarcely to be felt.

"7th. She had slept the greatest part of the night, and the pulse was at 84. The bowels were kept open, and she continued convalescent." 135.

But we must hasten to a conclusion, and are therefore compelled to pass over the remaining cases which are given in this interesting work. They are, we think, more generally cases of inflammation than some which are given in the earlier part of the volume, and display in the most decided manner the efficacy of blood-letting in such cases. For many excellent remarks and for the rules for the use of this remedy we must refer to the treatise itself.

The appendix contains four cases on which we must, however, make a few observations. Like those in the beginning of the epidemic, these cases do not appear to be unmixed examples of peritonitis. Their author himself seems to be aware that they present some "variety," and especially that there was more affection of the *head* than he had observed at the commencement of the epidemic. In fact, not one of these four cases is pure peritonitis. The first is greatly, at least, intestinal irritation; the second presents many of the effects of loss of blood; the third forms an example of that affection, noticed in our arrangement of puerperal cases, as inflammation of the substance of the uterus or ovaria, frequently leading to suppuration; these cases have not been sufficiently attended to or accurately described,—they are not unfrequent, and certainly demand a modified mode of treatment, and in particular a stricter application of *local* remedies; the abscess sometimes points externally in some part of the lower region of the abdomen, and sometimes bursts into the rectum. The fourth and last case in the appendix, is one merely of intestinal irritation.

Although we have thus ventured to express our candid opinion, and although that opinion is frequently at variance with that of our author, we part with him with sentiments of sincere and unfeigned respect; we have greatly benefited by the perusal of his excellent work, and are sure that all who read it will do the same. And we offer our observations as hints merely, in aid of future inquiry, with the conviction that, if they be so received, they will lead to some practical and beneficial results.

Before we dismiss the subject, we wish shortly to recapitulate the scope of our observations. We believe then puerperal peritonitis to be frequently more insidious, less attended by rigour, heat, affection of the head, and whiteness of the tongue, than intestinal irritation: in the latter affection the attack, and the changes from better to worse, are frequently sudden and severe, marked by severe rigor, which is, in its turn, followed by great heat, thirst, and affection of the head; in the former, the attack is sometimes insidious, there are fewer changes and repetitions of the attack, the course is more uniform, the rigor less severe, and sometimes altogether absent; the heat, thirst, whiteness of the tongue, and affection of the head, less, or totally wanting. It is observable too that these states occur *together*, or are nearly or totally absent, in different instances. An examination of Mr. Hey's cases will illustrate and confirm this remark.

The result of our observations then is this:—If there be no rigor, or only slight rigor, still *suspect* inflammation; if the surface is cool, the head unaffected,—if the tongue be clean or the pulse, even, little changed, *still suspect peritonitis*, and carefully examine the abdomen. If, on the contrary, there be severe rigor, if the heat and thirst be great, if the tongue be loaded, and if the head be affected,—whatever other affection there may be,—turn your attention to the state of the intestinal contents and suspect irritation from this source. We do not counsel you to neglect the lancet if there be symptoms of inflammation; it may be a *mixed* case; therefore do that, but leave not this undone.

In particular let us seize every oportunity of pursuing our researches into the morbid anatomy of puerperal diseases, and we shall come at last to understand that remark quoted by Dr. Denman, that "in the dissections of some who have died of this disease, (puerperal fever,) no appearances of inflammation have been discovered."

XII.

Quarterly Periscope

OF

PRACTICAL MEDICINE;

BEING

The Spirit of the Medical Journals,

Foreign and Domestic;

WITH COMMENTARIES.

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I.

PHYSIOLOGY.

———————— latas a numine leges
Religiosa doce, mentesque cupidine veri
Allice.

1. *Physiological Metamorphoses.** We well remember the time, (some half a century ago) when the transformations of Ovid claimed no small share of our credence. We entertained little doubt that Actæon had been devoured by his own dogs—and it was manifest that the watchful eyes of Argus adorned the gaudy tail of the Peacock. It is true, these airy fictions too soon faded before the light of dull reality—and we had little hope that, in our old age, physiological metamorphoses would rival those of the fanciful Naso. Such, however, is the fact. We have seen the tooth of carnivorous man take root in the head of the grain-eating cock—the "brawny part of Porter's bum" elevated to the loftiest feature of the "human face sublime"—the blood of a sheep

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* Experiments on the Transplantation of Animal Substances. By Dr. Dieffenback, of Berlin.

circulating in the veins of a citizen—and, now the whole animal creation changing their hides, hairs, and feathers, as readily as harlequin changes dresses in a pantomime. Dr. Dieffenback has been *usefully* employed for many years past in experiments on "*the transplantation of parts of the body from one animal to another.*" Before hazarding any speculation on the grand results which may be expected from these experiments, we shall give a short catalogue of the principal transplantations, referring to Graef's Journal for the details. In the first experiment, the feathers of a *black* chicken were transplanted into the neck, back, tail, &c. of a *white* pigeon. In the second, there was retaliation, as the pigeon's plumes were made to adorn the chicken. In the *third series of experiments*, the feathers of fowls, pigeons, sparrows, &c. were dibbled (by means of a trochar) into the backs and sides of puppies and rabbits. In the *fourth series*, the bristles of cats and wild rabbits were planted in the skins of pigeons. In the *fifth experiment*, a bunch of feathers was cut from the back of a pigeon, within an inch of the skin—a needle was then pushed down through each stump till the bird showed symptoms of displeasure—the bristles of a kitten were then introduced into the stumps—took root there and flourished luxuriously. *Sixthly.* The bristles of a cat and a dog were successfully engrafted on the back of a rabbit. *Seventhly.* The hairs of a friend's eyebrows were transplanted to, and took root in, Dr. Dieffenback's arm. *Eighth experiment.* A claw from a pigeon's toe was transferred to his tail. It did not stay there, but it deposited an egg—at least a very fine *new* claw sprouted out from the same place. Sometime afterward the feather which had been plucked out to make room for the claw, grew again, and a furious contest took place between the indigenous and exotic plants—victory at length deciding in favour of the former. *Ninth experiment.* A pigeon's head was scalped, leaving the pericranium on. A flap from the inner side of a pig's thigh, was fitted to the wound, and secured by sutures. It made an excellent scalp, and was soon crowned with a fine grove of bristles. *Tenth experiment.* The nose of a wild rabbit was cut off, and then sewed on again, where it grew as firm as ever.

We do not suppose that any one can be so insensible to the merits of these experiments as to start the rude question—*cui bono?* It is impossible to say what may *not* be the stupendous results to which they may ultimately lead. We shall expect to see the green fat of the turtle transplanted to the thorny back of the skate—and the humble rumps of our barn door fowls sending forth the elegant plumage of the bird of Paradise. The scalping knife of the Indian has lost its terrors. New *scalps* of any size or colour may be readily procured and fitted on, at the nearest friendly *wigwam*. Lastly, by a very trifling operation, to which the ladies will readily submit, Circassian eyebrows, Grecian noses, and ruby lips, will be as easily and effectually supplied by the experimental physiologist as any other article of head-dress by the milliner.

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2. *Physiology of the Nerves.* In corroboration of the doctrine of Bell and Magendie respecting the nerves of sense and motion, the fol-

lowing physiologico-pathological fact deserves record. A horse became lame of the right hinder extremity on the 27th May, 1823, which lameness disappeared in a few days. He was therefore put to work, but, after half an hour's exercise, he was covered with perspiration,—could hardly support himself on his legs—and soon fell down, his hinder extremities being completely paralytic. But it was found, that sensibility was as entire in these as in the fore legs or other parts of the body. He died the next day, and was carefully examined by M. Buley, veterinary surgeon at Paris. The inferior (corresponding in man to anterior) portion of spinal marrow was found softened and diffluent. The superior (posterior) portion presented no morbid appearance. The pulp of the lumbar and inferior sacral nerves was wanting in consistence—and their envelopes were red and inflamed. We consider this as a very satisfactory confirmation of the doctrine of Mr. Bell.

In an accident which happened to a horse, under the same veterinary surgeon, by which the facial nerve was divided, the curious phenomena and the novel doctrines of Mr. Charles Bell respecting the nerves of the face were also confirmed.

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3. *Temporary Blindness.* In the practice of Dr. Jones, of Haverfordwest, a curious case lately took place of blindness during the eruption of modified smallpox. This blindness was total, and continued three months, in spite of various remedies. The patient was a little girl, three years of age, who became suddenly affected thus; exhibiting, at the same time, great dilatation of the pupils, "indicating an exudation of lymph in the lateral ventricles of the brain, and consequent pressure on the origin of the optic nerves." At the termination of three months, during which she was otherwise in good health, she began gradually to recover her vision, and the recovery was complete. *Med. and Phys. Jour. April.*

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4. *Occlusion of the Intestinal and Urinary Passages.* We advise the curators of the college of surgeons to despatch a confidential agent to the department of the Meuse, in order to treat for the body (dead or alive) of Claud Rouget, more commonly known by the name of DAUDICHE, as a proper companion for the Sicilian dwarf, in the museum. Before we communicate the particulars of this extraordinary case to the public, we must say that we entertain doubts of its authenticity, since the narrator only gathered the items from popular report, or, at best, from the statements of others. At the same time, we do not deny the possibility of the case, though we look for actual ocular demonstration, before we give implicit credence to the narrative.

Dr. Prosper Sylvan Denis, a student in Paris, states that the said *Daudiche* is now sixty-eight years of age—that, till the age of ten, there was nothing particular in his conformation or health—that, at that period, it is said, one of his parents, for some sinister or self-interested purpose subjected the child to some cruel experiments, by which it would appear that the spine was either broken, dislocated, or contorted, so as to produce lesion of the spinal marrow, paraplegia, and cessation of growth in the lower half of the body. These last phenomena are sufficiently authenticated; but the main wonder is yet to come. The urinary and intestinal canals are obliterated at their terminations, and, consequently, Daudiche never passes either urine or fæces. Yet he eats with a good appetite; but, in a very short time afterward, vomits up the half-digested aliments, without pain or difficulty—then eats again, and so on.

The lower extremities of this man are no larger than they were at the age of ten years—the sexual organs are almost obliterated—the parietes of the abdomen almost touch the spine, so that there seems a vast vacuum or loss of substance between the ensiform cartilage and pubes. The upper part of the body is sufficiently developed—the memory is prompt and retentive; but the other intellectual faculties, not having been exercised much, cannot be judged of.

Daudiche and his friends resolutely deny all anatomical or physiological examinations; but Dr. Denis states that his father and grandfather, both medical men, had opportunities of ascertaining, by personal investigation, the above particulars, and that his statements are principally from their notes. Daudiche, in the quality of mendicant, and mounted on a little stage drawn on wheels, levies a very considerable contribution on the curious and charitable travellers who pass through his native town of Void, on the main road between Paris and Strasburgh. He takes his daily station near where the diligences stop, and collects a revenue sufficient for himself and his principal relations. The case is published in the April number of the Archives Generales, and Dr. Breschet, one of the editors, properly remarks that, till death and dissection confirm the above particulars, some doubt must attach to the statement. He cites a case of a similar nature, from Thomas Bartholin, who, while in Italy, saw a man, forty years of age, robust and healthy, who offered no trace of anus or genital organs. This state rendered his sex doubtful, but he was baptized as a female. At the age of twenty-four, however, he showed a beard, and claimed the privileges of the masculine gender. This man vomited, from time to time, the fæcal remains, through a horn, which he placed in his mouth at those periods, to prevent their contact with the tongue and lips. The urine distilled, *guttatim*, from a small aperture near the umbilicus.

We give these cases as we find them—neither believing with implicit credulity, nor denying with obstinate scepticism, the particular details. Considering the wonder-working powers of nature, there is nothing in the above case that is calculated to shut out belief in toto. We once saw a female vomit up the remains of her food for more than a fortnight, in consequence of a volvulus—and we verily believe that she died at last, more from the strong medicines we exhibited to force a passage, than from the actual obstruction of the intestinal canal. It is therefore impossible to say, how far nature can compensate for original or early defects in structure or function by vicarious and apparently improbable means.

Theory of Fever. Cullen, Darwin, Brown, and even Broussais, may now hide their diminished heads. The brilliancy of their theories is eclipsed by that which we are going to announce. The remissions and intermissions of fevers have puzzled our best theorists, and no satisfactory solution of the phenomenon has ever been given *till the present time.* Dr. Bailly *Bull. des Sc. Med. Mars* 1824) has loosed the gordian knot. His solution rests on the following fact. (Qy. is it a fact?) "All those localities which produce intermittent fevers in man, are those also where epizootic diseases are found among animals. In these last, the symptoms are *continued*—in the former *remittent* or *intermittent.* The post mortem appearances are the same in both. The periodicity of human fevers cannot, therefore, depend on the nature of the agents that produce them, nor upon any difference in the organs affected." What then is the cause?—It is such a brilliant discovery that, really, we are loath to bring it out in the paltry space of a few lines, when it deserves a whole volume for its enunciation. But we are ready to burst with the secret—and out it must come. The cause of the *periodicity* in human fevers, then, and *continuity* in those of brutes, is this; men are perpendicular by day and horizontal by night—whereas, brutes are horizontal by day and by night!!!—"Il a trouvé dans la position toujours horizontale des amimaux, et periodiquement horizontale et verticale de l'homme, le moyen de rendre raison de la continuité et de l'intermittence d'affections qui doivent necessairement dépendre de l'uniformité de la circulation chez les uns, et de la periodicité des congestions qui, deux fois chaque jour ont lieu sur nos organes." This discovery has been laid before the INSTITUTE, and we shall soon hear of the accession of "GLOIRE" to French genius in the report of that distinguished body. God forbid that we should, by a single comment, attempt to detract from the lustre which this discovery is calculated to shed on the genius of continental medicine.

We would just hint, however, *sub rosa,* to Dr. Bailly, that in Walcheren and Beveland,* where *man* is withered into premature old age by remittents and intermittents, the *cattle* are the finest we ever saw. And, by way of confirming his theory, we would suggest the experiment of causing men to walk on "all fours" in marshy countries, in order to ascertain whether or not they are, in such positions, liable to the ague.

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* And fifty other places which we could mention.

6. *Physiological Experiments.* We began the physiological department of this periscope in good humour—indeed, somewhat inclined to the merry mood. We could not but laugh at extravaganzas which only went to produce whimsical transformations of Nature, without endangering life or limb of the animals experimented on. We are also well pleased to see experiments made, from time to time, on the inferior animals, for the purpose of elucidating some obscure, or solving some doubtful problem in physiology. But when we observe the whole rising race of candidates for fame rushing impetuously, with knives, needles, saws, and poisons, on the living animals around them,—in order to find out some new phenomenon during their torturous experiments, we must pause and ask, is this the way to clothe the profession in the character of wisdom and humanity as well as science?—we think it is not the way—but our continental brethren are of a very different opinion. In Paris, the mania for vivisections is not repressed, but highly eucouraged by institutions which, in other respects, are calculated to further the march of medical science—so true is it that there is no unmixed good in this world. The Royal Institute lauds each successive train of experiments on living animals, no matter how directly contradictory of each other they may be—and thus, a constant stimulus is kept applied to the wild and unbridled ambition, (for it perhaps is not entitled to the name of zeal,) of all ranks of the profession in France. In chymical researches and experiments it is far otherwise than in physiological. *There*, no cruelty is exercised, and every new discovery is almost sure to turn to the advantage of the healing art. How far physiological experiments have contributed to strengthen our hands in therapeutics, we leave to the candour of the most enthusiastic of that party themselves.

We have been led into this train of reflection, on perusing the recent experiments of Magendie, as laid before the Institute, and as repeated before several respectable witnesses in London. Should there be no error or deception in these experiments, (which we are very far from vouching,) we are all at sea respecting the senses. The olfactory are no longer the nerves of smell—the optics of sight—the auditory of hearing? The fifth pair, if they do not exercise all these functions themselves, are, at least, the regents of the senses above mentioned. But we must let M. Magendie tell his own story. It was in the attempt to demonstrate the olfactory properties of the first pair of nerves, that our author found out—or thought he found out—that the sense of smell did not essentially depend on the said nerves.

"1. My first experiment was to lay bare the olfactory nerves in a dog, about a year old. I scarcely expected to find them sensible to the contact of foreign bodies, or even to pricking, the hemispheres of the brain being insensible to such means of irritation throughout the greater part of their mass; and accordingly pressure, pricking them deeply, and tearing them in various ways, produced no effect which indicated sensibility of these nerves. I was curious to see whether the direct contact of a very odoriferous body would afford the same result:—I therefore poured some drops of ammonia upon the nerve; at first the animal seemed not to perceive it, but soon showed proofs of lively sensation. I immediately discovered that the liquid had flowed over the sides of the nerve, had reached its lower surface, and consequently was lodged in the pit of the ethmoid bone. I then was of opinion that the ammonia had acted on the medullary part of the nerve, which we know is expanded upon the cribriform plate, and that at least the white inferior surface of the nerve possessed sensibility, if the cineritious substance of the upper surface did not.

"2. After these observations, I entirely destroyed the olfactory nerves, persuaded that I should then abolish completely the sense of smell. What was my surprise, on examining the animal the following morning, to find that he was yet sensible to powerful odours which I presented to him (such as ammonia, acetic acid, and the essential oil of lavender, &c.) The sensibility of the internal cavity of the nose had lost nothing of its energy: when a probe was introduced, the effects were exactly similar to those in a dog which had not been touched. This extraordinary phenomenon recalled to my memory a fact which I had passed over without much attention last year, because it stood so much opposed to received opinions, that I attributed the occurrence, I know not why, to some fault in the performance of my experiment. I allude to a duck, which survived for eight days after I had removed the hemispheres of the brain, presenting many curious phenomena. Among other singular circumstances, it still retained the power of perceiving strong odours. I exhibited this animal, and subjected it to various proofs of this, in the course I was giving at the time.

"To be better satisfied of the fact, I destroyed the olfactory nerves in many other animals, and the results were exactly similar; but I made the important remark, besides, that the sensibility, which I had before observed at the inferior surface of the olfactory nerve, extended only along the outer border of the cribriform plate; and from this I was led to conjecture, that the sensibility might belong not to the nerve of smell, but to the branch of the ophthalmic which passes from the orbit into the nose through a fissure in the cribriform plate.

"3. From this suggestion I was led to suspect, further, that the branches of the fifth pair, which are distributed among the cavities of the nose, are the organs by which the sense of smell is maintained after the destruction of the first pair of nerves. These branches in man are pretty numerous, though not very large; they consist, 1st, of the ethmoidal branch of the nasal: 2dly, the naso-palatin branch described by Scarpa: 3dly, of numerous branches which arise from the internal surface of the spheno-palatine ganglion. These nerves coincide in so far that they are all distributed upon the pituitary membrane.

"I was not aware of the exact manner in which the fifth pair gives its branches to the nose of the dog, and I requested M. Desmoulins, who is well skilled in these researches, to dissect this nerve in the dog along with me. We discovered that the ethmoid branch is much larger than in man, and that it supplies a considerable number of small branches to the uppermost part of the nasal cavity; we found besides that there is no spheno-palatine ganglion on the superior maxillary division, but that it sends numerous branches of considerable size, which are distributed on the inferior lateral, and internal parts of the nose.

"4. It was then anatomically possible that the whole sensibility of the pituitary membrane might depend upon the divisions of the fifth pair. But conjectures concerning organic functions, derived from anatomy, are worth nothing until they are proved by physiological experiments. I therefore thought of cutting the fifth pair of nerves, in such a manner that the animals might survive. This was more easily said than done. The nerves, as they pass out of the base of the skull, are embraced by the cavernous sinus and the internal carotid artery. Nevertheless I made the attempt in several rabbits; and had the good fortune to succeed in cutting them on both sides, in a number of animals, without producing any very serious injury. I made the same attempt on puppies, kittens, and guinea-pigs, and, when the nerves were once well divided, I was able to assure myself that every trace of the action of powerful odours disappeared. The same animals, which, before the experiment, sneezed, or rubbed their noses, or turned away their heads, when they were made to inhale ammonia or acetic acid, &c., continued perfectly undisturbed, when the fifth pair was divided, or only showed symptoms of the odour having affected the larynx. *The result of this experiment, in counterproof of the preceding, appears to me to show, that the sense of smell, as far as regards powerful odours, depends upon the branches of the fifth pair: and that the first pair of nerves has no share with the fifth in bestowing this function.*

"5. Here an objection presents itself. The odours employed, it may be said, are very active: they produce a chymical action upon the pituitary membrane just as when they come in contact with the conjunctiva. Is it not possible, when you destroy the sense of touch in the membrane of the nose, that you deprive it, not of the power of perceiving odours, properly so called, but rather of its sensibility to the impression of pungent and caustic vapours; such as those of ammonia and acetic acid? This remark may apply to these two vapours, but not to the oil of lavender or of dippel. At any rate, before the performance of these experiments, it could scarcely have been presumed, that irritating vapours did not act on the sense of smell.

"6. For the purpose of doing away with this difficulty experimentally, I destroyed, by bruising them, (en les broyant) the olfactory nerves in a setter, the fineness of whose nose is well known; and I observed just as in my former experiments, that he could easily perceive powerful odours. But I was desirous of ascertaining whether he could distinguish the smell of meat, or cheese, or food in general. With this intention I enclosed portions of these in paper, and placed them before him; he invariably tore off the paper, and then devoured the contents. Yet I cannot regard this experiment as satisfactory, because the dog, in other circumstances did not appear able to detect, by its smell, food placed near him without his knowledge. Supposing this last result to be correct, it does not prove, however, that the fifth pair is not the agent of the sense of smell, because the injury which is necessary to destroy the olfactory nerves, necessarily produces inflammation within the cavity of the nose, quite sufficient to injure, in a secondary way, the power of smelling. This subject I am pursuing at present. In chickens, ducks, and magpies, I removed the lobes of the brain with the whole of the olfactory nerves. They continued to possess all the the sensibility which belongs to the membrane of the nose, and manifested evident signs of the action of powerful odours on the sense of smell: I cannot comprehend how the contrary has been lately published.

"7. To M. Ramon, medical inspector of the Maison Royale at Charenton, I am indebted for a fact which appears to me to prove, that the integrity of the hemispheres of the brain is not indispensable for the exercise of smelling. It is common to see patients, who have been afflicted for several years with madness, fall suddenly into a condition of dullness and torpidity analogous to complete drunkenness; their limbs totter, their motions are not under their control, and their speech is disturbed; this state, which is beyond the power of relief, is followed by an entire loss of the intellectual faculties, and not long afterward by death. On examination, the hemispheres are found gorged with blood, the membranes inflamed, and the cortical substance deeply altered. M. Ramon has observed in such individuals that the sense of smell continued, not only with regard to powerful and pungent odours, but also to such as are much more transitory.

"Such are the observations concerning the nerve of smell which I present to physiologists: they are as yet incomplete, and require to be followed up. I hope, however, that they may induce others to repeat them, and not to neglect an opportunity of confirming or invalidating them, by pathological observations.

"8. From these researches it likewise follows, that animals, such as the dolphin, in which there are no olfactory nerves, are probably not deprived of the sense of smell, notwithstanding what has been asserted by naturalists. If it be confirmed that the faculty of smelling belongs to the fifth pair, we have still to inquire, what can be the use of the olfactory nerves and their lobes. Nothing hitherto is known which is likely to point out the way to us, in which case they would require to be added to the list of those parts of the nervous system concerning the functions of which we are still entirely ignorant."* 85.

The next train of experiments which M. Magendie instituted, were on the influence of the fifth pair of nerves on the nutrition and functions of the eye.

After dividing the fifth pair of nerves, within the cranium of a rabbit, our author found that all sensibility was lost on the same side of the face, the inside of the nose, the surface of the conjunctiva, &c. Even ammonia applied to the eye made no impression, while in the other eye it produced violent lachrymation. On the side of the divided nerve the eye was dry, there was no winking of the eyelids, the ball of the eye seemed to have lost all motion, the iris being strongly contracted and immobile. Next day, when the animal was examined, the sound eye was found inflamed by the ammonia, the other presenting no phenomena of the kind. "The section of the nerves had thus prevented the developement of inflammatory action." To enable him to study these various phenomena with care, he that day cut the fifth pair in a number of rabbits—in some, on one side—in others, on both. It was by observing these animals during the following days that he was led to discover the facts now to be stated.

"Twenty-four hours after the division, the cornea begins to become opaque, at the end of seventy-two hours it is much more so,—the opacity increases, and five or six days after the operation it is as white as alabaster.

"From the second day the conjunctiva becomes red, appears inflamed, and secretes a very abundant, milky, puriform matter: the eyelids are either wide open and motionless, or else they are sealed by the puriform matters which have dried between their edges, and when they are separated a considerable quantity of matter above described escapes.

"Towards the second day after the section, the iris is likewise observed to become red, its vessels are developed, and, in fine, the organ inflames.—False membranes are formed on its anterior surface, which, like the iris itself, have the appearance of a disk pierced in the middle. These adventitious membranes at length fill the anterior chamber and contribute to the opacity of the cornea. Is it not a very extraordinary phenomenon to witness an active inflammation with suppuration, and complete insensibility of the part inflamed, which are caused by the division of a nerve? Before going farther, I would mention that this rapid opacity of the cornea at first appeared to me to depend upon the prolonged contact of the air. To ascertain this, I cut the seventh pair in a rabbit, which, according to Mr. Charles Bell, governs the movement of winking: but, although the eye of this animal remained constantly exposed to the air for many days, no opacity of the cornea took place; nor any inflammation either of the conjunctiva or of the iris. I then suspected that the opacity depended on the want of the secretion of tears. It is possible, said I, that a membrane such as the cornea may have occasion to be constantly soaked by a limpid fluid to maintain its transparency. To ascertain if my conjecture had any foundation, I completely removed the lachrymal gland in two rabbits, but no opacity of the cornea was perceptible during eight days that they survived this extraction. My supposition therefore was without foundation. The opacity of the cornea, the inflammation, and the suppuration of the conjunctiva and of the iris, were thus found to depend upon nervous influence.

"Towards the eighth day after the section of the fifth pair the iris becomes visibly altered; it detaches itself from the sclerotica, and its centre ulcerates: at the end of two or three days the humours of the eye, being muddy and partly opaque, make their escape, and the eye is reduced to a small tubercle, which only occupies a very small part of the orbit, giving something hideous to the aspect of these animals. If the eye be now dissected, it is found to contain nothing but a matter which resembles cheese newly coagulated, and that the retina has almost entirely disappeared; a trace of it here and there is all that can be seen.

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* Vide Med. and Phys. Journal for July.

"Vision appears to be, if not entirely lost by the division of the nerve, at least very much weakened, and if, some hours after the operation, a sharp instrument be pushed against the surface of the retina, the animal gives no mark of sensibility;—when both nerves are cut in an animal, he appears blind, and his gait is very singular: he only moves with the chin strongly pressed against the ground, pushing his head before him, and using it as a guide in the same way as a blind man does his staff. The conduct of an animal in this state differs entirely from that of one simply deprived of sight, the latter easily directing itself by means of the moustaches and of the sensibility of the skin of the face: he stops before holes, perceives obstacles,—in short, it would often be difficult to know whether he was blind or not. While the animal in whom the fifth pair has been divided has only one way of moving, and instead of avoiding obstacles, often persists in pushing against them for many hours so as to excoriate the skin on the forepart of the head.

"The tongue is insensible on the side where the nerve is cut, and on either side if both nerves be divided. The animal in this case holds it out of its mouth, but is able to draw it in towards the pharynx. Sapid bodies have no apparent action on the anterior part of the organ; but they have an evident effect upon its centre and root. In dogs and cats, the lower jaw drops, after the intersection of the fifth pair on both sides, which greatly impedes deglutition, and sometimes renders it impossible. They have the same gait as rabbits, but instead of resting on the chin, they often press against the tongue which gets underneath, in consequence of the dropping of the jaw, and is rubbed against the ground during progression.

"When only one nerve is cut, changes take place in the nostrils, mouth, and surface of the larynx of the same side: half of the tongue becomes white, the epidermis becomes thickened, the gums separate from the teeth, and food lodges in the intervals thus formed; probably the animals, being no longer arrested by feeling these substances, push them between the teeth and gums without being sensible of it.

"Observation has led me to believe, *that the division of the fifth pair likewise entails the loss of hearing*: this would be less extraordinary, as in many animals the nerve of hearing is evidently only a branch of the trifacial. *If this last result be correct, all the senses would thus be under the influence of the fifth pair, and the general theory of sensations would require to be reformed.*"* 88.

The fallacy of *experience* has been acknowledged since the days of Hippocrates, and the observation must apply still more strongly to *experiments* than to experience. In M. Magendie's experiments, we think the sources of error were numerous and prolific. When we consider that, to divide the fifth pair of nerves, the operator was obliged to thrust a sharp cutting instrument through the cranium, the middle lobe of the brain, and almost to the centre of the basis cranii, where, in most instances, M. Magendie himself opened the cavernous sinus, while dividing the fifth pair, so that the animals soon bled to death:—when we consider these circumstances, we say, how can it be averred that no injury is done to vitiate the experiments? The third and fourth nerves too, lie in such immediate proximity to the fifth, that, although they may not be actually divided, it is highly probable they receive injury, and that thus their functions are disturbed.

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* Vide Med. and Phys. Journal, No. 305.

But the paramount source of error evidently lies in the confounding common or general, with specific sensibility. Thus the experimenter tells us, that, after destroying the olfactory nerves, the animal was still sensible to powerful odours, as ammonia, &c. This only proves that common sensibility was present, and warned the animal to avoid disagreeable irritation. His own experiment of the dog and the cheese proves this, though in a different manner. The dog tore off the paper that surrounded the cheese, *when placed in his view*, and devoured the latter. This was, or might be, at least, from *sight*, not smell. When the same viands were placed near him, but not immediately in his view, he intimated no consciousness of their presence. In short, we place little confidence in the truth of M. Magendie's conclusions, though we have considered it our duty to lay his experiments before our readers.

II.

PATHOLOGY.

1. *Paralysis on the same side as the Cerebral Injury.*[*] There is no law in pathology more general than that the paralysis should be situated in the side opposite to that where the pressure is exercised on the brain; and yet there are exceptions even to this rule. Several modern pathologists have doubted these exceptions; but, for our own parts, we do not doubt them, because we have seen two unequivocal examples in our own practice. Lieutaud relates one instance, but not circumstantially. We shall begin with the case of the celebrated Malpighi, as recorded by Baglivi.

Case 1. Marcellus Malpighi, aged 70, had been subject, for some years, to bilious vomitings, which being suppressed, he had acidity of the stomach, palpitations of the heart, and both renal and vesical calculi. On the 25th July, 1694, he was struck with apoplexy, followed by paralysis of the whole of the right side. Bleeding, and other evacuations were prescribed by Baglivi, and after forty days the patient recovered of the apoplexy, and even of the paralysis; the memory, however, and some other of the intellectual functions, remaining seriously deteriorated. On the 29th of November of the same year, he was again struck with apoplexy, preceded by much vertiginous affection, and this attack proved fatal in a few hours. On dissection, an enormous quantity of blood was found in the *right* ventricle of the brain, and only a little serum in the *left*.

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[*] M. Bayle. Revue Med. Janvier, 1824.

This case certainly goes for nothing in support of the question here discussed, though it was brought forward for this purpose by Baglivi himself.

It is abundantly evident that the quantity of blood found effused, on dissection, was the immediate cause of death, and could only have been extravasated in the *last* attack of apoplexy. The cure of the hemiplegia in forty days after the first attack, is a sufficient proof that there was only congestion of vessels, not extravasation of blood, during that attack. The matter was put beyond a doubt, by the absence of any clot or cyst in the brain after death.

Case 2. A porter received a contusion on the *left temple*, with slight fracture of the bone. He was trephined. Nevertheless he was affected with paralysis of the *right* arm. He died in three days, and, on dissection, blood was found extravasated on the *right* hemisphere of the brain, and none on the *left*.—*Smetius*.

This case, though not sufficiently detailed, proves that the paralysis may be on the same side as the sanguineous effusion. But then, it may be queried whether the paralysis of the *right* arm was owing to the effusion of blood on the *right* hemisphere of the brain, or to the injury done to the *left* hemisphere by the contusion and fracture? We should be inclined to take the last side of the question.

Case 3. A child, two years of age, was seized with a lethargy or stupor, but not in a very severe degree. He recovered from this state, and again relapsed into a still more profound lethargy. In this last attack, the *right* side was paralyzed and insensible. He died on the fourth day. On dissection, Forestus (who relates the case) found the *right* side, both of the cerebrum and cerebellum, entirely disorganized, and affected not only with abscess, but with sphacelus. On the *left* side all was sound. Although the symptoms are detailed in an unsatisfactory manner, and we know of no such thing as *sphacelus* of the brain, in the present day, yet it is undeniable that the paralysis was on the same side as the organic lesion in the brain, whatever was the real nature of that lesion.

Case 4. A man, upwards of seventy years of age, and who, for some years, had exhibited symptoms of cerebral disorder, was suddenly seized with paralysis and loss of sense in the whole *right* side of the body. He died in a few hours. On dissection, blood was found extravasated in the ventricles. A large ulceration, whence the blood had proceeded, was found to occupy the place of the *right* thalamus optici.—*Valsalva*.

Some doubt is thrown on the pathology of this case, in consequence of the extravasated blood having penetrated into *both* ventricles; for in this case *pressure* must have been made on both sides of the brain. It ought, however, according to the general doctrine, to have been greater in the *right*, than in the left ventricle, and consequently, the paralysis ought to have been in the *left* side of the body, rather than in the right.

Case 5. A woman, forty-seven years of age, was seized with apoplexy, in the month of November, 1680, and the *right* side of the body completely deprived of sense and motion. Brunner (who relates the case) prescribed blood-letting, strong counter irritation, and ultimately purgatives. She gradually recovered the use of the paralyzed side, though a weakness remained in the parts. After this attack, her disposition became quite altered, and she addicted herself to drinking strong liquors, which brought on her the reproaches of her husband, and sometimes corrections of a more tangible and material form. She was subject to vertiginous affections and cephalalgia. Eight years afterward, she was again seized with a severe attack of apoplexy, and sudden loss of sense. She died in a few hours. On dissection, the cause of the former attack of apoplexy, viz. the remains of a clot of blood, was found in the *right* hemisphere of the brain, and the cerebral substance surrounding the clot, of a yellow colour, and of a denser structure than elsewhere. Two other smaller caverns, or remains of extravasation, were also discovered in the same hemisphere. The right ventricle was full of blood, and some had penetrated through the septum lucidum into the left ventricle. A recent clot, or coagulum of extravasated blood, was found in the right hemisphere—the cause of course, of the last or fatal attack of apoplexy. The *left* side of the brain was sound.

This case is more complete in its details (many of which we have omitted) than any of the preceding. We think it incontestably proves that paralysis may sometimes be on the same side as the cerebral lesion, that occasioned it.

Case 6. An old woman was seized with apoplexy, accompanied and followed by paralysis (loss of motion, but not of sense) in the upper and lower extremities of the *right* side. Three months afterward, she fell into a state of languor and debility, of which she died in an hospital in a few days. The *left* hemisphere of the brain was perfectly sound. Morgagni (the relator of the case) discovered a remarkable disorganization (a softening) of the brain in the *right* hemisphere, which was evidently the cause of the apoplexy and paralysis that took place three months before the patient's death.

Case 7. This case was also observed by Morgagni. A female peasant, twenty-four years of age, six months gone in pregnancy, was seized with apoplexy, and also paralysis of the *right* side of the body. Abortion quickly took place, and she expired half an hour after this event. Morgagni demonstrated the brain of this woman, in his public lectures of 1724. He found a serous effusion under the arachnoid membrane; but what was of more importance, a very large clot of blood in the substance of the *right* hemisphere of the brain. No cognizable derangement could be traced in the *left* side of the encephalon.

This case was so very conclusive, and militated so strongly against the doctrine maintained by Morgagni himself, that, distrusting his own observation, he asked all the students who attended the case, whether they were certain that the paralysis was on the *right* side of the body. But they, one and all, replied in the affirmative.

Case 8. A soldier, thirty-three years of age, became affected with temporary insanity. In the course of a month, reason was restored; but he continued weak, and this weakness was followed by a series of epileptic attacks of an irregular kind, which left much intellectual as well as corporeal debility behind. In the course of eight months, the patient lost entirely the power of speech, and three weeks after this event, he was seized with apoplexy, and general loss of motion and feeling. On the second day, the *left* arm was paralytic, the sensibility remaining. On the fourth day he died. On dissection, there was found an intimate adhesion of the tunica arachnoidea and dura mater, on the anterior portion of the *left* hemisphere, both membranes being thickened and inflamed, the latter covered with membraniform exudations. Beneath this part, the brain itself was softened and disorganized, resembling so much bouillie, its central portion being almost fluid. The whole of the *right* side of the brain was sound.—*Morgagni.*

This case appears fully as conclusive as any that preceded. Dr. Bayle does not adduce any modern instances, which he might have done. We have seen two or three unequivocal examples of paralysis and cerebral injury on the same side, one of which we published in the first volume of the Transactions of the Associated Apothecaries.

The question now recurs, why do we find these exceptions to a law so universal in pathological physiology? Areteus first annunciated the law of opposite paralysis and injury, and after his time the rule was considered as absolute, while they gave the most erroneous and even ridiculous explanations of the law. Mistichelli appears to have been the first who offered a natural and true solution of the problem, by discovering the interlacing; or, as it may be termed, decussation of the nervous fasciculi, composing the medulla oblongata. After this decussation was ascertained, the problem respecting paralysis on the opposite side was not only solved, but the rule was now considered more absolute than ever, and exceptions impossible. Winslow, Santorini, and Morgagni, confirmed the discovery of Mistichelli; but yet the discovery was almost forgotten, till Dr. Gall lately demonstrated the decussation or twisting of the cerebral fibres in the medulla oblongata, since which he has been generally considered the discoverer. Our readers are aware that M. Serras, and some other continental writers have recently denied the possibility of the paralysis being on the same side as the injury—in the face of facts, such as those we have just cited. But accurate anatomical investigation has shown that we should not be too precipitate in coming either to conclusions or exclusions, on this point; since, although there is a general twisting of the nervous filaments in the medulla oblongata, there is *not a total change of sides*. Some fibres are found *not to* decussate, but to continue from the brain to the spinal marrow—or, if it must be so, from the spinal marrow to the brain, on the same side. This fact, so amply proved and demonstrated by Gall, offers the only rational solution which we yet possess of the exceptions to the general rule in question. It is curious that even this piece of minute anatomy did not escape the penetrating eye of the illustrious Morgagni. At the conclusion of case 7, above cited, he observes—"how shall we account for the paralysis being on the same side as the cerebral lesion? Although there are a great many nervous filaments of the brain, which are continued into the medulla oblongata et spinalis, and from thence into the nerves, yet it is not certain that they *all* decussate. It is highly probable that there are parts in the hemispheres of the brain, from which cerebral filaments are continued along the *same side* to the spinal marrow and nerves—and it is also probable that these are the portions of the brain in which the lesions are situated, when the paralysis appears on the same side as the cerebral injury.—*Loco citato.*

At the same time, it must be confessed that the explanation here attempted is liable to some weighty objections, which cannot be completely solved in the present state of our knowledge. Thus, when we consider that there are but a very few cerebral filaments which do *not* change sides, or decussate in the medulla oblongata, and, consequently, that there can be but a few points in the encephalon from which these fibres or filaments originate, it seems unaccountable how large disorganizations or dilacerations of the brain should only involve these minute origins, leaving the other, or decussating portions untouched. But, although the causes are concealed from our view, the facts are not less certain—that paralysis and cerebral lesion may be occasionally on the same side.

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2. *Melæna.* Dr. Martland (*Ed. Journal, No.* 2) has given us a case of melæna, with the appearances on dissection. The patient was forty-nine years of age, addicted to dram-drinking. On the 16th July, 1823, when Dr. M. was called to him, his alvine evacuations were of the colour and consistence of liquid pitch, remarkably fetid, but in small quantity. He had no pain in the abdomen, but felt an oppressive weight about the præcordia. The strength was impaired, countenance pallid, and very anxious—pulse 110, and weak—skin hot and dry—urine high-coloured and scanty—vertigo. A saline cathartic, and afterward powders composed of nitre and the compound powder of ipecacuan. Most of the symptoms were relieved by this plan, but the stools continued the same. He then took a mixture composed of the nitre sulphate of magnesia, and sulphuric acid. The stools now became nearly natural. Dropsical effusion in the abdomen and lower extremities supervened. Mercury, elaterium, digitalis, opium, nitre, juniper-top infusion. By these remedies, the dropsy was removed. In October, the melæna returned in an aggravated form. He vomited up half a pint of black grumous blood, became comatose, and died.

Dissection, 48 *hours after death.* Black grumous blood had issued from the mouth since death, and pressure on the abdomen caused it to be forcibly discharged. Much fat in the omentum—the whole alimentary canal much distended with fetid gas—half a pint of black grumous blood in the stomach—but little of the same in the intestines—no proper fæces to be seen—peritoneal coat transparent, and showing the villous coat throughout the whole canal—the latter coat was inflamed in every part, assuming a gangrenous hue, at the cardiac and pyloric extremities. In the duodenum, the inflammation was trifling, but it increased gradually toward the ileum, where it seemed in the worst state of gangrene. No effusion between the coats of the intestines. From the termination of the ileum to the descending branch of the colon, were progressively exhibited different appearances, from the gangrenous inflammation to a blush. The colon was pretty healthy, but the villous coat of the rectum was gangrenous. The liver was of a pale brown colour, and smaller than usual, with a shrivelled fissured surface. It contained neither blood nor bile. There was no unusual appearance in any of the other viscera or parts.

The profession is indebted to Dr. Martland for this minute dissection of a disease comparatively rare in its occurrence, and little understood in its pathology.

3. *Organic Changes in the Bronchia.* The younger Andral, already favourably known to the profession by his pathological researches, has published a paper on the subject in question, through the medium of the *Archives Generales* for April last. The cases brought forward in illustration were treated in M. Lerminier's wards, in La Charite. They are, therefore, well authenticated.

It is well known that Laennec, in his valuable work on "Mediate Auscultation," drew the attention of the profession to this organic change in the air tubes, but the facts which he had then collected were scanty, and required confirmation by others. Andral avers, that his own personal experience has verified the proposition of Laennec—and that he has constantly found *dilatation* of the bronchia, when it existed, accompanied by chronic pulmonary catarrh—and that when the dilatation was considerable, it was announced by a resonance of the voice (resonnance de la voix) resembling pectoriloquism. In a less degree, the bronchial dilatation was still discoverable by characteristic signs —but in a very slight degree; it was not to be detected by any outward sign. Examples of the different shades are found in the cases detailed, of which we shall abbreviate the more important, for the benefit of the English reader.

Case 1. *Dilatation.* A porter, sixty years of age, entered La Charite in the beginning of January, 1822, presenting all the symptoms of organic disease of the heart, as orthopnœa, puffiness of the face, anasarca, extended pulsation of the heart, &c. On applying the stethoscope between the right clavicle and the nipple of that side, a sound somewhat resembling pectoriloquism was heard, and in that part only.

The patient died suddenly a few days afterward. On dissection, the lungs were found gorged with a serous fluid, and the bronchia of the right lobes, especially at the upper part, were greatly dilated as compared with those of the left side. In two or three places the mucous membrane, lining the bronchia, was ulcerated. There was hypertrophy of the ventricles, with dilatation of their cavities.

Case 2. A man, 62 years of age, was received into the hospital, in the month of April, 1822, who had been affected with cough and expectoration for five or six years. He had lately presented symptoms also of organic disease of the stomach. When he entered the hospital, he was in the advanced state of merasmus—frequent cough—much expectoration of a thick and yellow matter. No particular diagnosis could be got from the stethoscope. He sunk from the disease of the stomach. On dissection, the pulmonary parenchyma was healthy and crepitous throughout. In the middle lobe of the right side was found a portion of bronchium dilated to three times the size of that immediately above it, and which, in a healthy state, would have been proportionally smaller. There was ulceration of the pyloric orifice of the stomach.

This partial and limited dilatation did not appear to exercise any particular influence, and was inappreciable by any external phenomena. The case is chiefly valuable as showing what a large quantity of purulent and thick expectoration can issue from the mucous membrane of the lungs, without any disease of the parenchymatous structure.

Case 3. A hair-dresser, forty-six years of age, was subject to catarrh with expectoration, for some years. Towards the end of 1821, he had an attack of hæmoptysis, for the first time. In February, 1822, he expectorated large quantities of puriform and highly fetid matter. For eight days previous to his entrance into LA CHARITE, he felt a sharp pain in the left side of the chest. He was received into the hospital in the end of March, having orthopnœa, and much anxiety of countenance. He expectorated, without difficulty, a thick yellow matter, mixed with considerable quantity of phlegm. He had so much pain in the left side of the chest, as to be unable to bear percussion of that part. The application of the stethoscope discovered evident pectoriloquism in the left side. M. Lerminier pronounced the patient to be affected with phthisis pulmonalis, of a slow progress. The nature of the expectoration, and the pectoriloquism indicated the existence of excavations in the lungs. There was also reason to suspect inflammation of the serous membranes in that side of the chest. The want of respiratory murmur in the left side of the thorax led to the suspicion that effusion had taken place there; or that the pain prevented the action of the respiratory muscles, and, consequently, the introduction of air into that lung, in the usual quantity. In the first days of April, the expectoration changed its character, being thinner, but still very fetid, and so copious as to fill three common spitting pots in the twenty-four hours. During April and May the patient became progressively emaciated—the pain in the side continued, and prevented his lying on that side—expectoration still more fetid—cold chills in the evening—burning heats in the night—no morning perspirations—a circumstance that appeared strange, in a man presumptively labouring under tubercular consumption. In the mornings, and through the day, the pulse was but little accelerated. The patient lost all relish for food—yet the tongue was natural—never had vomiting or epigastric uneasiness. In May, a diarrhœa came on—then stopped, and re-appeared alternately. He sunk in the middle of June.

Dissection. Great merasmus. Several patches of false membrane were spread here and there over the left pleura pulmonalis—no adhesions between it and the pleura costalis—left lung little crepitous—yet it swam in water. In the superior lobe of this lung there was a cavity the size of a walnut filled with matter resembling that expectorated. Into this cavity opened a bronchial tube that would admit a writing quill. This dilated tube and the cavity were lined with a similar membrane, which was reddened and thickened. It was now evident that what had been taken for a tubercular excavation was no other than a bronchial dilatation. Into the internal surface of this dilated portion several small openings were seen that led into other bronchia. In pursuing the various bronchial ramifications of the left lung generally, numerous dilatations, though on a smaller scale, were discovered—none of them, however, terminating in a cul de sac, as the above. The parenchymatous structure of the lung between these dilatations, was somewhat denser than natural, as if compressed by the dilated bronchia. The right lung, which was much more crepitous than the left, presented also some bronchial dilatations, but to a much less extent than on the other side. They were filled with a puriform liquid—and some of them were large enough to contain a hazel nut. There was no other disease in the chest. There were some small ulcerations in the mucous membrane of the stomach; and the internal surface of the tranverse and descending colon was highly injected. These last were of recent occurrence, of course, and corresponded with the period of the bowel complaint.

In the above case it will be seen that even under the eyes of Laennec himself, a dilated bronchial tube caused the phenomenon of pectoriloquism, so indicative of tubercular excavations. In the second place, the case exhibits almost every symptom of tubercular phthisis (excepting only the morning perspirations) where the parenchymatous structure of the lungs was, we may say, perfectly sound. We also find that this kind of phthisis destroys life, with nearly the same certainty as the tubercular species, though there would be greater hope, in such cases, of a procrastinated fate. What could cause the fœtor of the expectoration?—It is curious that, in a case of Laennec's, where the same kind of disease was found after death, there was a similar fœtor of the breath.

Case 3. A man, 50 years of age, fell a victim to organic disease of the liver. He had long been affected with obstinate cough, and copious puriform expectoration. Auscultation was frequently tried at the hospital and the mucous rattling (rale muqueux) was very evident in the left side of the chest, both before and behind. The resonance of the voice was not greater there than natural. Percussion elicited a clear sound. This man evinced no symptom of tubercular degeneration in the lungs—the "rale muqueux" appearing to depend merely on accumulation of mucus in the bronchia. Dissection justified this opinion. The greater number of bronchial tubes in the left lung were red, on their internal surface, and filled with puriform mucus. There were several bronchial dilatations in this lung, filled also with similar matter.

Stricture of the Bronchia. This is a much more rare disease than dilatation. Like this last, it may occupy a single bronchial tube, partially or totally—or it may take place in several—nay, in all the bronchia of an entire lobe. As in dilatation, so in contraction, the cause may be chronic inflammation, ending in thickening of bronchial parietes. In some cases, however, it may be owing to mechanical compression of a bronchial tube from contiguous tumours. The symptoms of these strictures or contractions will vary according to the seat and extent of them.

Case 4. Chronic Bronchitis—Stricture of some of the Bronchia, &c. A woman, 26 years of age, entered La Charite in the course of September, 1822. She said she had become affected with a catarrhal complaint at the age of 18, which had never left her since. For the first few years it gave her but little inconvenience. At 22 she began to feel dyspnœa, and soon afterward had a copious hæmorrhage from the lungs. From that period the cough became frequent and distressing—she wasted in flesh and strength, and in the course of the next two years had several pulmonary hæmorrhages. From 24 to 25, Nature seemed to make some stand against the disease, and the symptoms did not gain ground. At 25, she had another severe hæmorrhage, which continued several weeks, more or less. From thence there was rapid loss of strength, and when received into the hospital she was in the last stage of emaciation. By auscultation a cavity was announced under the left clavicle, around which percussion elicited a dull sound. She died three weeks afterward.

On dissection, vast cavities were found in the *left* lung, around which the parenchymatous structure was hepatised. In the *right* lung, no tubercles existed, and the parenchyma was sound. The bronchia of both lungs were red, and in those of the right lung the following appearances presented themselves. Scarcely had the principal bronchium begun to give off its ramifications, when the parietes of the latter were seen greatly thickened, and their diameters considerably diminished—that is, to one-third or one-fourth of their natural size. In several places the tubes recovered their proper calibre, and then again became contracted. We pass over our author's attempts to show how these contractions might have been distinguished in the living body, because they are totally unsatisfactory. But it is interesting to be acquainted

with the actual changes themselves, as time and observation afte
may lead us to appreciate the external phenomena produced by

Case 5. A man, 31 years of age, entered the hospital on the
July, 1822, presenting the symptoms of organic disease of the
The respiratory murmur was sufficiently audible every where e
under the right clavicle, where it was extremely feeble. Perc
was unsatisfactory, on account of the infiltration of the thoracic pa
The patient said that, for a long time, he had felt a tightness in tha
and an inability to breathe there. In the middle of August, sym
of hydrothorax came on, with great dyspnœa, and death close
scene on the 7th September. The right lobe of the lungs was no
crepitous, but otherwise sound. The principal bronchium of thi
a few lines from its origin, was so contracted that the finest probe
scarcely pass through. It then resumed its natural calibre, just
it began to branch off in ramifications. The mucous membrane
strictured portion was red, and very much thickened. Ther
nothing else remarkable in the lungs of either side. There was
aneurism (hypertrophy with dilatation) of both ventricles of the
—contraction of the origin of the aorta—and general redness
digestive tube. The sense of tightness in the right side of the
and the nearly inaudible state of the respiratory murmur there
very probably owing to the stricture of the bronchium; but as
symptoms might be produced by many other morbid states, we
set them down as characteristic of the complaint. It is curious
almost all the instances which have been observed of bronchi
traction, the stricture was in the superior lobe of the *right* lun

Two other cases are related by our author, in one of which the
compression of the large bronchia of the right lung by a mass
cysted melanosis. The respiratory murmur was very feeble i
side. In the other case there was a total obliteration of some
bronchia by a similar disease. We shall state the particulars
last case, on account of the extent of the melanosis.

Case 6. A man, 59 years of age, had been affected for many
with troublesome cough and habitual dyspnœa. He enter
Charite in the month of October 1821, in a state of hopele
Percussion elicited a very dull sound below the left clavicle,
neither the respiratory murmur nor mucous rattling could be
The pulse was small and frequent. M. Lerminier regarded th
plaint as pulmonary melanosis. He died in a few weeks.

Dissection. The left lung was converted into a black homog
mass, of such density that the scalpel would scarcely enter it.
whole appeared like a mass of extravasated black injection after
cooled. The principal bronchium of this side was sound, as a
three or four first divisions—but further than these no trace of a
could be discovered. The rest of the lungs was sound. The
but few cases on record where the melanosis of the lungs went

extent. We think that M. Lerminier's prognosis, or rather diagnosis was a lucky hit, and not the result of legitimate reasoning or caculation.

4. *Spinal Consumption.* In the sixth Number of the Med. Repos. (New Series) Mr Gaitskell, of Rotherhithe, has called the attention of the profession to the distinction of spinal consumption from phthisis pulmonalis and tabes mesenterica.

The *cause* of spinal consumption is spinal distortion. Both sexes fall a prey to this lingering and insidious malady—but infinitely more of females than males. In Mr. G.'s experience the proportion has been nine to one. The years between 14 and 21 are those in which there is greatest danger.

"The foundation of this disease is often laid at the early age of four or five years, and first displays itself in a disposition of the infant to sit or stand with the head inclined forward, but so slightly, as barely to be perceived by the parents. In a few months this inclination becomes noticeable, and the child complains of a little pain in the back, is sick at the stomach, and rather costive, while the muscular flesh wastes. This is attributed to worms, and medical or empirical advice sought for;—if the former be obtained, a few doses of calomel are administered, followed by cooling purgatives and regulated diet. These, with the aid of a recumbent position (which the little patient instinctively covets,) afford some temporary benefit." 468.

In this manner the disease will sometimes go on for years, till the stature becomes extended, when the stooping posture becomes conspicuous, when mechanical contrivances, suited well enough for inanimate bodies, are quickly put in requisition. By the aid of generous diet, exercise in the open air, rural amusements, and cold bathing, the progress of the disease is sometimes interrupted, and health ultimately restored. But, on the other hand, it too frequently happens that the muscular power suddenly fails—the bowels become obstinately confined—the animal heat sensibly diminished—the appetite impaired—accession of dry cough—atrophy, and death.

Diagnosis. Mr. G. considers that thus the spinal differs from the pulmonary phthisis in many very essential particulars. In the *latter*, there are rigors, succeeded by heat and colliquative sweats, with quick and contracted pulse. In the *former*, there is gradual loss of strength, particularly of the lower extremities—no febrile paroxysms—cool skin (except in the last stage, when the lungs become involved in the disease)—obstinate bowels—slight cough without expectoration; while in common phthisis, the cough is teazing, with muco-purulent expectoration. "It is equally distinguishable, says Mr. Gaitskell, from tabes mesenterica; because in this disease, there is great abdominal fulness, mucous and watery stools, with hetic fever and emaciation; whilst in spinal consumption, instead of abdominal fulness, the bowels are flat and wasted, so that the pulsations of the aorta may be felt through the abdomen."

In respect to the *origin of the disorder*, Mr. Gaitskell has repeated what has now been repeated by many others—forced, as it is, upon the bluntest sense of the most inattentive observer. The rage of the present day to cultivate the mind at the expense of the body, leads to much and irreparable mischief. Such unnatural mental excitation frequently occasions cerebral disorder ending in idiotcy—or, where the chain of connexion is too often lost sight of, in a host of nervous and anomalous complaints, as puzzling to the physician as they are distressing to the patient. The indolence generated by these precocious exertions of the mind, checks the disposition to perpetual motion, so congenial to the young and growing frame, which indolence and its consequences are increased by warm rooms, impure air, and improper diet. Mr. Gaitskell thinks, that another evil is the habit into which children are allowed to get, of reading in a low chair with the book resting on the lap. This leads to a stoop forward, and distortion of the spinal column from its natural and proper shape. Then come the evils of the boarding-school system. Young ladies are packed off to seminaries to allow the mothers time for dissipation at home. At these seminaries they have imposed upon them great restraints, sedentary habits, impure air, scanty diet—while their minds are crammed with ill-assorted knowledge little suited to their years or dispositions. But we must hasten to the *treatment*.

It has been a rule with Mr. Gaitskell, for many years past, when consulted by patients who had lost much flesh by absorption and imperfect chylification, to examine the spine—and, if he found a greater projection than ordinary of the spinal processes, or particular tenderness on pressure with the fingers—or any fixed pain in supporting the body perpendicular to its base—then to suspect "a slow inflammation of the intervertebral substance," which, if not interrupted, leads to alarming evils, such as suppuration, ulceration of the bones, paralysis of the lower extremities, gradual marasmus, and death.

"To stop the progress of this insidious and certainly destructive malady, I have usually recommended the application of four leeches on each side the spine close to the part affected, and when the leeches have fallen off, warm bread and water poultices, till the bleeding ceases. These I have repeated, in the adult subject, every fourth day for a fortnight, till the pain is relieved; and as a deposition of lymph is a natural consequence of every chronic inflammatory action, I have blistered the part two or three times in succession, according to symptoms. These means I have found to be aided by adopting (under certain limitations) the plan of that very excellent surgeon, the late Mr. Baynton, of placing the patient on a horse-hair mattress without a pillow." 471.

As auxiliaries, the warm bath—occasionally an emetic, if the stomach is disposed to reject its contents—a cathartic pill at bed-time (the bowels being confined, as they usually are) purged off next morning with the black draught—after which "it is important to obtain well-regulated hepatic secretions." For this purpose, our author has found five grains of the hydrargyrum cum creta, with an equal quantity of rhubarb every night in a little honey, the best medicine. The action of this is essentially aided by an injection every second night. "It is surprising how much this contributes to promote the proper peristaltic motion of the intestines."

In a month's use of this plan there is generally considerable improvement, and then the patient is allowed to sit up two or three hours daily. As strength increases, walking out of doors is prescribed, with the head upright, or with a weight thereon, as recommended by Mr. Wilson.

We think that, upon the whole, Mr. Gaitskell's advice is judicious.

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6. *Arachnitis cured.* (Dr. Martinet, Revue Med. Jan. 1824.) Our continental brethren have at length discovered that the symptoms of debility, mental and physical, dependent on inflammation of the sensorium or its coverings, are not to be cured by the "medecine expectante"—nor even by antispasmodic or anodynes—but by blood-letting, local and general—cold to the head—and counter-irritation. This is the "*aujourd' hui*" treatment in France, though it has long been familiar in England. "On ne cherche plus exclusivement, par des antispasmodiques ou autres prétendus calmans, a s'opposer dans ces cas à l'irregularité des phenomènes spasmodiques et au désordre *ataxique* des operations de l'intelligence, qui en constituent les caractères diagnostiques. On attaque directement *aujourd' hui* sa nature inflammatoire, quelle que soit la forme des symptômes sous lesquels elle se presente ; et c'est par des evacuations sanguines générales ou locales, associées la plupart du temps à des derivatifs puissans sur les extrémités, &c. que l'on combat cette maladie." We rejoice to see pathology thus leading to successful practice on the continent, where indeed there is ample scope for improvement in therapeutics. The following cases are not unworthy of perusal.

Case 1. Chevillot, aged 48 years, of strong constitution, was taken on the 12th of July, with general malaise, to which was soon added pain in the epigastrium, with vomiting. Twelve leeches were applied to the epigastric region, and the symptoms were removed. 13th. The patient after eating, became affected in nearly the same way. Still there was no headach. 14th. He was seized with delirium, and on the 15th he was conducted to the HOTEL DIEU. His symptoms now were, violent delirium, so that several persons were required to hold him. His face was much flushed—great agitation—strong pyrexia—tongue moist. Bled to 32 ounces (this is astonishing in France) and sixteen leeches applied to the neck. In the night, the bandage came off the patient's arm, and two pints or more of blood were lost. 16th. The delirium of a gay kind (delire gai)—constant loquacity—eyes sparkling—pupils natural—agitation general—face rather pallid—pulse full, hard, and frequent. Forty leeches to the neck. Diluents. 17th. The loquacity continues, as also the agitation—tongue and mouth dry—pulse still full and quick. Forty leeches around the temples and forehead. Cold affusion on the head. The delirium now ceased completely. 18th. The countenance calm, and the intellect clear, except the memory, which is imperfect—all the bad symptoms abated—and the strait-waistcoat removed. An erysipelatous inflammation was now discovered on the arm, beginning at the lancet puncture. Twenty-five leeches to the arm—diluents continued—a warm bath. 19th. Convalescent. 20th. Considerable augmentation of the phlegmonous erysipelas on the arm, with appearances of suppuration in different points. Seventy leeches were applied to the arm in the course of the day. Diminution of the inflammation. Incisions were made into the erysipelatous parts in order to give issue to the purulent matter, and health was perfectly restored by the end of September.

On the above case we have to remark that, as far as vascular depletion is concerned, the medical officers acted as energetically as on this side of the channel. Local depletion was carried to a greater extent than could well have been practised here, consistent with economy, for the expense of leeches, on such a plan, would be enormous in this country. But it must be obvious that the treatment was defective in respect to purgatives. It does not appear that any aperient medicine was exhibited throughout the whole course of the disease. We think we will be borne out by the experience of practitioners in this country, when we presume that much of the sanguineous depletion might have been saved by active cathartics. A few doses of calomel and colocynth, followed up by salts and senna, would have produced some pints of intestinal secretion, which we verily believe to be equal, on such occasions, to so many pints of blood abstracted from the vascular system.

Case 2. A man of strong constitution, a voiturier, 28 years of age, was seized, without any assignable cause, on the 13th July, 1823, with violent pain in the head, which became augmented on the 14th, and accompanied by fever. On the 16th, he was carried to the Hotel Dieu, when the following symptoms were noted. Eyes sparkling and the vessels injected—pupils natural—countenance animated—delirious, so as to require the strait-waistcoat—great loquacity—constant agitation—no convulsions or rigidity of the members—subsultus tendinum—epistaxis—tongue clean, red, and moist—pulse hard and quick—heat of skin moderate—breathing free—chest sounds well. Venesection to 12 ounces (trois palettes) twenty leeches to the neck—cold affusion on the head—whey. The blood was much buffed—the cold affusion was followed by a well-marked calm. 17th. Continuation of the delirium, which is of a more lively description—face covered with perspiration, and red—less agitation than yesterday—pulse less rapid. Twenty-four leeches to the temples—the cold affusion. 18th. Quiet delirium—less subsultus—tongue dry, but not red—pulse not much accelerated—heat of skin natural. Twenty-four leeches to the temples—cold affusions. 19th. The same state. 20th. Intellectual faculties restored. 23d. Was convalescent.

The same observations, as to the neglect of purgation, apply to this as to the former case.

Case 3. This need not detain us long. The patient was a young girl of seventeen, who, to remove a cutaneous affection from the face, applied the liq. plumb. acet. dil. The eruption being suppressed, she became affected with violent headach, delirium, stupor, febrile movements, and diarrhœa. This patient was recovered by only twelve leeches and a blister. *But the diarrhœa continued all the time.*—Another proof how much sanguineous depletion may be abridged by a free state of the bowels.

Dr. Martinet remarks that the diagnostic signs of inflammation of the arachnoid covering the superior portions of the hemispheres, are—disorder, more or less considerable, of the intellect, with irregular movements, preceded, in the great majority of cases, by intense headach. The absence of any local loss of sense or motion, on either side of the body, distinguishes this complaint from affection of the cerebral mass itself. Had there existed any inflammation of the thoracic or abdominal organs, the symptoms would have been more complicated, and the arachnitic inflammation might have been entirely masked, and the issue fatal.

6. *Physiology and Pathology of the Spleen.* Dr. Vetch, Physician to the Charter-house, has recently published a paper in the Medical and Physical Journal, on the above subject. He concurs in the opinion long ago and still maintained, that the spleen, besides its office in health (whatever that may be) serves as a reservoir for the blood when determined suddenly to the centre from the surface by various accidents, as sudden atmospherical vicissitudes;—or, in certain diseases, as intermittent fevers. But it is to the pathology of this organ that Dr. Vetch's attention is principally directed in the paper before us, as he has had considerable opportunities of observation among our troops, after their return from the fatal swamps of Walcheren. The effects of an enlargement or obstruction of the spleen, Dr. V. thinks, "are such as are most universally referred to the liver." If this be the case, it is doubly necessary to investigate them. But it is to be remembered that, in most of those cases of enlarged spleen, the sequelæ of intermittent fevers, the liver is also affected, either in function or structure, and therefore the practitioner may be led somewhat astray, in keeping his attention strongly fixed on the organ most prominently diseased.

"In enlargement of the spleen, the patient seldom or never complains of much pain in the situation where it might be expected; his appetite is generally good, yet his powers of assimilation are obviously deficient; he loses flesh, and is incapable of any muscular exertion; his features have a peculiar dark, bilious, or mahogany hue, but the conjunctiva preserves its white and healthy appearance; perspiration is in time wholly suspended, and the skin acquires the appearance and feel of satin;* the lips are pale, and there is generally much wasting of the gums;

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* "This is observable in convalescents from the remittent fever of warm climates. Vide JACKSON *on Febrile Diseases*."

the urine is limpid, and secreted very rapidly, but contains little or no urea. The patient's mind is generally morose and desponding. All these symptoms of a deranged condition of the spleen, prove that, although the patient may exist for a long time without those changes going on in the blood, which would otherwise take place, the powers of life cease to be renewed. An attack of epistaxis,* or the appearance of moisture upon the skin, are generally signs of returning health. The symptoms I have mentioned are commonly attended with coldness of the lower extremities, generally towards evening, and the pulse is quicker than natural." 443.

A state of the system, such as is above described, Dr. V. has often found in connexion with amenorrhœa—in which cases, an occasional acute pain is liable to occur in the region of the spleen, on any slight exertion. A determination of blood to the spleen is often vicarious of discharges from other parts, in which cases, if long continued, the spleen attains a very large size. In the only three cases where our author saw death take place in the cold state of ague, the spleen was so much distended, and its structure so much altered, that it appeared like a mass of dark uncoagulated blood, which crumbled on the application of the finger. There is a particular form of rheumatism (a modification in fact of intermittent fever) which our author has found to be a source of splenic enlargement. The complaint has been endemic in many places from which ague has disappeared, in consequence of drainage and cultivation. It is a rheumatic affection of the muscular fibres, accompanied by great want of energy in the cutaneous circulation. It seems to have a cold and hot stage, inasmuch as the pain is regularly preceded by a coldness of the parts affected, and also of the lower extremities. It is tedious and untractable, and produces enlargement of the spleen. The most frequent exciting cause of all, in our author's experience, is mental depression and anxiety—long famous, indeed, for causing disorders of the stomach, liver, and spleen—but more frequently, we apprehend, the *consequences* of such disorders.

Treatment. Enlargements of the spleen sometimes require evacuations from the neighbourhood, by cupping, leeching, &c. " but a great part of the treatment must consist in obtaining a regular state of the circulation, and at the same time guarding against all causes of excitement until we have removed every symptom of local congestion."

" It is, perhaps, difficult to find any one article of the materia medica, which possesses any great tonic power, which will not, in a short time, require to be discontinued, by its diminishing either alvine discharge, or the secretion of urine. I have, however, been fortunate in finding one very applicable to such a state of disease as I have endeavoured to describe ; it is valuable as a tonic, and not less so from the diuretic power, which it never fails to exert, if given in the form to which I confine its use. The article on which I have bestowed this panegyric, is a weak infusion of the leaves of the arbutus uva ursi; if the powder of the leaves is substituted it produces a bitter much too intense to answer the end proposed. I was led to use this medicine extensively, both with officers and soldiers, who had laboured under protracted disease, after the expedition to Walcheren. My subsequent experience has given me ample opportunities of appreciating its value as a medicine, in all cases resembling those I have mentioned. The successful application of small blisters to the epigastric region and left hypochondrium, and the insertion of a seton, are highly useful auxilaries." 446.

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* " This was very common with convalescents from the Walcheren fever."

Our author hopes he has now said enough to draw the attention of practitioners to the symptoms attending cases where the system seems to have lost its powers of assimilation. Hysteria, hypochondriasis, mental aberrations, and *diabetes*, are to be found "arising out of primary obstruction of the function of the spleen, as without the co-operation of this viscus, the blood ceases to acquire its recrementitious properties, none of the secretions possess their natural constituent parts, and, what is also worthy of notice, external injuries do not produce the secretion of what is called healthy pus."

We think Dr. Vetch's observations are entitled to much attention; but, considering how intimately linked are the liver, stomach, and spleen in their pathological relations, it is possible he may somewhat overrate the part which the last of these organs plays in the mystic drama of disease.

7. *Scirrhus of the Pylorus, and thickening of the Muscular Coat of the Stomach.* [Dr. Louis. Archives, Avril, 1824.] The first case of this kind related by our author, was a woman, forty years of age, who was admitted into La Charité, under Dr. Chomel, on the 18th of September, 1823. She had been ill about twelve months. The complaint began with sense of weight in the epigastrium after eating. This state was soon succeeded by nausea and vomiting—not immediately after dinner, but towards the evening, when most of what she had eaten would come up. The appetite had gradually diminished—emaciation made progress—she felt heat at the pit of the stomach, a disagreeable taste of rotten eggs in her mouth, with nausea and vertigo. Examined at the hospital, she was found greatly emaciated; thirst—anorexia—epigastrium not painful on pressure—to the right, and on a level with the umbilicus, a tumour the size of a man's fist, indolent, and not very sensible to pressure—belly rather more protuberant in the left than in the right side, giving the appearance of the stomach distended—pulse small, feeble, and slow. On the first of October she evinced anxiety; vomiting of bile; pains in epigastrio—flatulence. These symptoms were succeeded by diarrhœa, which disappeared in a few days. On the 21st, she began to vomit, for the first time, a brownish black thick liquid—and next day, there was a great change in the patient's features for the worse. She died two days afterward.

Dissection. The stomach was large and of an opake whiteness externally. It became suddenly contracted about two and a half inches from the pylorus, and in this contracted and cylindric portion it was very hard, and from 15 to 18 lines in thickness. The stomach contained about two pints of a thick black liquid, similar to that which the patient had vomited, among which were some portions of half-digested aliment. The parietes of the stomach (leaving aside the cylindric portion) were twice their natural thickness, and very firm. This thickness and firmness were seated in the muscular coat of the stomach, throughout its whole extent, but varying in different places. The cylindric portion was so contracted in its calibre, that the point of the little finger could scarcely be introduced. The pylorus was in a state of scirrhus rather than cancer—for ulceration had not actually commenced. The peculiarity of the case consists in the general thickening of the muscular coat of the stomach, examples of which our author could not find in Morgagni, Piort, Chardel, or other authors. He asks, rather pertinently, can this hypertrophy of the muscular coat of the stomach be caused by the exertion of that structure in forcing the digested aliment through a contracted pyloric orifice? Considering how frequent is scirrhous pylorus, and how rare is hypertrophy of the stomach (at least, the notice of such circumstances) we think the theory which would connect them as cause and effect, rather doubtful, notwithstanding that the following case comes in to its support.

Case 2. A man, aged forty-one, of small stature, sober habits, thin, and rarely ailing previously, had been, for some time, a prey to great anxiety of mind. To this succeeded loss of appetite—uneasiness in the stomach after eating—eructations of an acid kind, especially after taking any wine; but no sense of heat in the epigastrium. When these symptoms had continued about a month, vomiting succeeded meals, at one, two, or three hours' interval. Constipation of the bowels, and great general debility followed. Three months after the commencement of this last train of symptoms, the patient entered the wards of M. Chomel, on the 17th October, 1823. He was now pale, emaciated, highly sensible to the impressions of cold—anorexia—no thirst—pain of the epigastrium, relieved by gazeous eructations, and greatly increased by any distension of the stomach from flatus. A protuberance of the epigastrium, resembling the figure of the stomach, was observable—and an obscure tumour in the region of the umbilicus, cognizable by moderate pressure. The patient frequently ejected a clear fluid from the stomach, and was constipated. After being quiet at the hospital about a fortnight, with proper regimen, and very little medicine, the symptoms were moderated, and the patient could take a little food, being seldom sick afterward. But this calm was not of long duration. Towards the beginning of December, thirst was complained of—the appetite disappeared—diarrhœa occurred—the epigastric pains augmented—sickness and vomiting increased—and the patient died on the 24th of the same month.

Dissection. Stomach voluminous, and descending below the umbilicus, being of very opake whiteness, and its parietes much thicker and firmer than natural. It became suddenly contracted, as in the former case, about two inches from the pylorus, into a cylindrical form, of great hardness, and from 15 to 18 lines in thickness, admitting with difficulty the point of the little finger. The muscular coat of the stomach was double its ordinary thickness throughout, but without any other appreciable alteration of structure. The pylorus was scirrhous, but not ulcerated.

The two cases above detailed, we grant, are sufficient evidence of such a thing as hypertrophy of the whole muscular coat of the stomach; but other cases will be necessary to prove that the cause is contraction of the pyloric orifice of that organ.

P.S. Since writing the above, we have seen a case published in the *New Bibliotheque Medicale*, by M. Patissier, which bears on the subject in question. A woman, fifty-two years of age, had long laboured under symptoms of scirrhous pylorus, and at length sunk under the disease. On opening the abdomen, M. Patissier was astonished to find the stomach so large as to conceal the whole of the intestines, extending down to the iliac fossæ. When opened, there was a discharge of nearly ten pints of dark-coloured fluid, such as had been vomited by the patient during life. Notwithstanding this extreme distension of the stomach, its parietes were *not attenuated*. The pyloric orifice was scirrhous, and would scarcely admit the point of the little finger. The editor of the journal cites a similar case from Morgagni, and attributes the dilatation of the stomach to the contraction of the pyloric orifice.

III.

SURGERY.

1. *Injuries of the Head—Concussion, &c.*[*] The motto of the medical practitioner should be "*nil desperandum.*" We occasionally, we might say *often*, see such extraordinary recoveries or escapes from the very jaws of Cerberus, that we cannot be too cautious in our prognosis, or too careful in persevering both in our visits and remedial agents (however inert) while life remains. We have been led to these reflections at this moment, by the perusal of Mr. Shoveller's case, in the June number of our respected cotemporary. The patient was a seaman, twenty-seven years of age, short and muscular, who was struck by a block, while aloft, and precipitated on the deck below, from a height of about thirteen feet. He was taken up insensible, with stertorous breathing, slow pulse, dilated pupils, and other symptoms of compression. He was bled to thirty ounces, when he became faint, but opened his eyes,

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[*] Case of severe Injury of the Brain, &c. By W. Shoveller, Esq. Surgeon of His Majesty's Ship Jupiter.—*Med. Repos. No.* 6, *New Series.*

and uttered some incoherent words, falling back again into a state of insensibility. On examining the head, a tumour, the size of a pigeon's egg, was perceived over the right parietal bone, but no fracture or depression could be distinguished. At four, p. m. of the same day, he was again bled to twenty-four ounces, and had ten grains of calomel, the head to be covered with cold wet cloths. *2d day*, is still soporose, and appears delirious, with great oppression. The skull laid bare, at the place above mentioned, exhibited the symptoms of injury. He lost twelve ounces of blood by this operation, and seemed relieved. *Evening.* Delirium with extreme restlessness—pulse 110, with reaction on the surface. Venesection to twenty-four ounces, when faintness supervened. Ten grains of calomel—an enema—head to be kept wet and cold. *3d day.* Has passed a better night—enema has operated well—pulse 84. But he is still delirious. Five grains of calomel, and three of antimonial powder every three hours. *4th day.* Had a bad delirious night—pulse 90 and firm; temperature increased—bled to twenty-four ounces. *5th day.* Still delirious and restless, with febrile excitement. Mouth slightly sore from the mercury;—this omitted; to have digitalis and nitrate of potass three or four times a day. The temporal artery opened, and eight ounces of blood detracted. *6th day.* Delirium and jactitation excessive last night, and nearly the same to-day—pulse 90 and firm—tongue white—fever—bowels free. Venesection to twenty ounces, and a blister to the scalp. *7th day.* Has passed the night better—talks incoherently—and has still much jactitation—pulse 86—skin cool. In the evening there was strong symptoms of debility, and some sago and wine was ordered. *8th day.* Seems rather better—pulse 84—less mental aberration. *9th day.* Continues to improve. In the evening a relapse. Delirium, flushing of the face—violent throbbing of the left temporal artery—pulse 100 and firm. Temporal arteriotomy to twelve ounces, after which he became more calm. Bowels free. *10th day.* His mouth is more affected by mercury—but there is no regular ptyalism—had a bad delirious night—passes his stools involuntarily. To have wine and sago every two hours, with decoctum cinchonæ. *11th day.* "Countenance assumes a more morbid appearance, and is indicative of sinking. Low muttering delirium—pulse feeble—Alvine discharges are still frequent, and passed in his bed." In this almost hopeless condition he remained five days, soiling and destroying all his bed-clothes by involuntary excretions. By this time the integuments over the sacrum, &c. were ulcerated. From this period, however, he gradually, though slowly recovered—at least to a certain extent. He has numbness and feeble power of the lower extremities—indistinct articulation—tongue, when projected, is tremulous, and drawn to the left side—his recollection, especially as to the Jupiter, in which he was actually embarked, has totally failed him. Nine months after the accident, his intellects were almost entirely restored—but his lower extremities are still tremulous and paralytic—his general health and appearance improving. Invalided.

We think it will be admitted that the above patient was in a very hopeless condition for some time, and that most surgeons, young and old, would have prognosticated his death. That some very serious injury was sustained by the brain, independent of the consecutive inflammation, will, we think, be allowed, both from the current symptoms, and the subsequent effects of the accident. But what was the nature of that injury? Would the application of the trephine over the seat of the external injury (we mean before reaction came on) have been of any service? we suppose this idea will be scouted by modern surgeons, who seem to have a *trepanophobia*—if we may be allowed such expression. The subjects of concussion and compression have afforded much scope for controversy—especially as regards their treatment; and it may not be uninteresting to those at a distance from the metropolis, to know the sentiments of one of our first surgeons—Sir Astley Cooper, on these matters. We have looked into the published lectures of Mr. Mingay Syders—and also into the still more recently published notes in the Lancet and Scalpel, from which sources the following observations are taken.

1. *Concussion*. Sir A. defines *concussion* to be simply the effect of a shock received by the brain, accompanied or not by organic lesion—while *compression* depends on either depression of bone, extravasation of blood, or formation of pus—any one or all of which will produce the same symptoms. He observes, that if a surgeon be called to a man in a state of stupefaction, not in a great degree, with regular pulse, easy breathing, the accident having existed some hours, the case is concussion, and not of a dangerous character. But if the patient has been first seized with vomiting, loss of muscular power, aberration of the mental faculties, intermitting pulse, unequal breathing,—then it is a dangerous concussion. In simple concussion, Sir A. observes, the patient when roused up, will have his pulse much accelerated—from 70, for example, to 120, or more. This, he thinks, is a diagnostic mark of concussion. The pulsation of the carotids is also greater in proportion than that of the other arteries of the body.

In the slighter cases of concussion, Sir Astley appears to think there is merely *a change in the circulation of the brain*. We should be more inclined to attribute the phenomena of concussion to the disturbance (occasioned by the shock) in the vital powers or properties of the cerebral mass itself, than to mere disturbance of the circulation. When concussion is violent, he observes, a "lesion of the brain takes place; but, when it is slight, no appearances can be discovered, on dissection, which indicate any alteration in structure." [Lancet.] This being the case, have we any proof that the disturbance of intellectual function is *entirely* dependent on change of the circulation?

In respect to the *treatment* of concussion, Sir Astley justly remarks, that the great danger we have to dread, is from inflammatian. Blood-letting, therefore, is our sheet anchor. But it should not be rashly carried to too great an extent. Here, as elsewhere, we must be guided by the symptoms, which, to an attentive observer, will always indicate and contra-indicate blood-letting. Some degree of excitement or reaction in the brain, seems necessary after concussion, and this is to be controlled only, not entirely annihilated, by repeated and large bleedings. Sir Astley relates a case of concussion with slight laceration of the brain, which happened in one of the Borough hospitals, where the surgeon bled, and thought he could not bleed too much. He bled twice a day, till the patient became pale, dejected, powerless, and, in ten days, lifeless, without manifesting any cerebral inflammation. On dissection, it was found that there was a slight laceration of the brain, with some extravasation of blood : but no attempt had been made by nature to heal the wound. Sir A. thinks, that the great abstraction of blood from the system prevented all attempt at adhesive inflammation in the brain. Still he admits that it is often necessary to take away blood, after the first large bleeding—but it must be in small quantities, watching the symptoms with the greatest possible care. He states the case of a gentleman who fell from his horse, while riding to London, and who received a concussion of the brain. He required the abstraction of 180 ounces of blood from the arm, besides leeching to the amount of 30 ounces more—and yet there was some hardness of the pulse, and inflammation of the brain after the very last bleeding. We need not dwell here on the highly dangerous and unscientific practice of bleeding the moment an accident of this kind occurs—merely because it has occurred. There is generally a recoil of the circulation, and a diminution of nervous energy for a time after the receipt of a serious injury—and to bleed in that period is preposterous. We should wait, of course, till the pulse rises, or other signs of reaction occur. We are then to use the lancet, to prevent inflammation, or extravasation, if there be rupture of vessels, or laceration of parts. In Mr. Syder's notes, Sir Astley is made to recommend local, rather than general bleeding—at least, to prefer temporal arteriotomy, or opening the jugular vein, to venesection by the arm. In the more recently taken notes, this practice is not insisted on. Small doses of calomel at night, with the sulphate of magnesia next morning, are recommended. Of emetics Sir Astley speaks with caution. He remarks, that nature's operations are generally salutary, and may afford us many hints. Vomiting is a very common occurrence after a severe injury—and Sir Astley avers that he has seen good effects from emetics in concussion of the brain. But he prudently dreads their effects, where there is any extravasation of blood, or tendency to apoplexy. On this account, he always waits four or five hours after the accident before he orders them. His object appears to be, to "propel the blood towards the brain, and thus restore the powers of life." If the pathology of concussion be merely defective circulation through the vessels of the brain, then vomiting is well calculated to accelerate the circulation in them, and, indeed, in all the vessels of the body. But we fear our knowledge as to the exact condition of the brain in concussion is yet very limited, and not sufficient to ground a doctrine on. Then, again, can we certainly distinguish between concussion with, and without organic lesion?—we believe no man will pretend to this certainty—even after several hours have elapsed from the time of the accident. On all these accounts, we apprehend that emetics will be dangerous agents in the hands of the young, the inexperienced, or the inobservant practitioner. Where the stage of depression lasts long, and the supervention of reaction appears doubtful, we would be more inclined to give ammonia, and other grateful stimuli with caution, rather than hazard the violent commotion of an emetic. Where concussion of the brain, however, has taken place after much repletion or intoxication, which is often the case, then emetics are far less questionable than under opposite circumstances. As for the minor indications of treatment, they will readily present themselves to the mind.

As to trephining in cases of *concussion*, the operation cannot be defended on any other principle than the *suspicion of local extravasation* at the spot where the injury is received—and then the case becomes a compound of concussion and compression. We think, for example, that Mr. Cunningham's case, at the head of this paper, was a compound one of commotion and compression—else why should the permanent paralysis ensue. But in what part of the brain the compression existed, would have been difficult to ascertain. After reaction has come on, it would be only adding injury to injury, to apply the trephine.

2. *Compression.* Sir Astley lays down the main features or symptoms of compressed brain, as consisting of *stertorous breathing, slow pulse, and dilated pupils*, in addition to those of concussion already described. Compression results, of course, from extravasation of blood, depression of bone, or formation of matter. In the *first* case, the lecturer observes that the symptoms do not come on immediately. "The person first becomes stunned from the blow—after a little time becomes comatose, and it is difficult to rouse him—he is put to bed, and falls asleep—and in that sleep apoplectic stertor comes on." [Scalpel, p. 75.] The seat of the extravasation may be between the meninges or into the substance of the brain—but this makes no difference in the symptoms, excepting that if a coagulum of blood presses on the origin of a particular nerve, there will be partial paralysis of the part supplied by that nerve. *Treatment.* If the extravasation be accompanied by fracture, the trephine may be applied with advantage, before any excitement takes place; the bowels are to be kept open, and the patient quiet. In addition to these, we must deplete freely, to prevent inflammation. But if there be no bruise or fracture to indicate the situation of the extravasation, it would be madness to seek for it with the trephine. Even when the trephine is applied, we can only remove blood that is extravasated outside of the dura mater. We are not authorized to cut through that membrane, to liberate any fluid beneath.

Fracture of the skull, Sir Astley properly remarks, is not in itself dangerous, unless accompanied by depression, extravasation, or concussion. The object is to prevent inflammation. For mere fracture, no operation is now, of course, ever thought of. We quote the following passage from page 78 of the Scalpel.

"In fracture, with an extensive opening, approximate the edges of the wound immediately, and heal it as quickly as possible; as you thereby prevent inflammation of the dura mater, which is very apt to occur in these cases. If there be concussion, or compression, with fracture, you may trephine, but do not be in a hurry; as, when I was a dresser, I have often sent for a surgeon to a patient labouring under compression or concussion; yet, by taking away blood in the interim, the symptoms of concussion or compression have disappeared. Delay then the operation, till you have tried for some time to relieve the symptoms by depletion, by bleeding, and purging. For the symptoms of concussion, the treatment must be such as I described in my last lecture. If the fracture should be accompanied with extravasation, deplete; and if that should not succeed, trepan." 78.

Depression. Sir Astley observes that there is some difference of opinion on the practice in these cases. When fracture is accompanied by depression, the symptoms come on immediately, as the cause is immediate. Sir A. tried an experiment on a dog, whose head he trepanned for this purpose. Having detached the dura mater from the bone, for some distance around the perforation,* the experimenter compressed the brain slightly with his finger, without any perceptible effect. On increasing the pressure, the animal shrunk, and endeavoured to escape. The pressure being still further increased, coma, loss of power, slow and irregular pulse were produced. The pressure removed, the animal soon recovered his power, though apparently giddy, and scampered off. Sir Astley mentions a source of deception respecting depression, which we have many times witnessed. A man, and particularly a young person, gets a severe blow on the *Head*, by which the integuments are puffed up into a tumour. In the centre of this tumour there will be a feeling as if the bone was considerably depressed or beaten in, and it is not easy to persuade an inexperienced surgeon to the contrary. Yet, in five or six days, all will come smooth again, and the bone will be found entire. The external table of the skull too, will often be beaten in, in adults, (for in old and young people there is no diplœ) without any injury to the internal table.

"I divide fractures of the skull into *simple* and *compound*, as the treatment differs in the two cases very considerably; there is also concussion or compression, or not. Let us take, then, this case; suppose you are called to a patient, who has a portion of bone driven in, yet, on speaking to him, you find his mind perfect; here, then, are no symptoms of concussion or compression. But, on the contrary, suppose you are called to a case, where the person has lost the powers of mind and body; here you have concussion, or compression, or both. If fracture be *simple*, viz. if there be no wound, and no symptoms of injury to the brain, it would be the worst of practice to make an incision through the scalp, and trephine; for it would add to the danger, by making that a compound fracture which was before only a simple one; for inflammation rarely follows when the fracture is simple, but often after an incision has been made; therefore, if you can, always avoid it, never make an incision through the scalp, where there is fracture, if there be no symptoms of injury of the brain; if there be symptoms of injury to the brain, draw blood, purge, and see how far they are the symptoms of concussion; and then, and not till then, trephine. A great many years ago, I was called in by a surgeon, to a lady, who had fallen against the fire-place, and a piece of the bone of the forehead became depressed; there were no symptoms of injury to the brain, and she recovered by depletion alone. The practice, formerly, was to make an incision in almost every case. When inflammation of the dura mater, or the membranes of the brain, has once existed, you do not retard it by trephining, and the patient goes gradually to death. I will give you two, of many, instances, on which my opinions are founded; one occurred to Mr. Cline, and the other to Mr. Birch. A man came from Walworth, and was under the care of Mr. Cline; he had received a blow on the head, which had forced the bone in. Mr. Cline said to the patient, "here is a case of depression, you had better submit to the operation of trephining;" the man said, "I am no judge, do what you please, Sir;" the man had no symptoms of injury of the brain, and walked into the operating theatre; the operation was performed, and he walked out again; no bad symptoms came on, and he soon got completely well. The patient, with depression, under the care of Mr. Birch, would not have the depressed portion removed; the consequence was that, in eleven days, pain of the head came on, and inflammation, when he lost the powers of his mind, and was operated upon, but it did not at all arrest the symptoms, and he died of inflammation of the brain. In the other hospital, two boys were admitted; one for depression of a portion of the os frontis, from the kick of a horse; the other for the same accident from a blow; one had the portion of bone raised, and did very well; in the other, the operation was delayed, in consequence of the interference of his mother, and the boy died of inflammation, after having been trephined. Inflammation does not always follow fracture with depression. If there be fracture with depression, and that exposed, I use the elevator; put it under the depressed portion, and raise it; if the bone be comminuted, you can remove the loose portions, and raise the depressed part; but, if it be wedged, I would trephine. I have found that, from raising the depressed portion of bone, no mischief ensues; but if you do not raise it, inflammation will arise. Two circumstances I will call to your attention; when fracture occurs with depression, a small spicula of bone will sometimes enter the brain, and produce epileptic fits. I remember this to have occurred in a negro, who had a depression of bone, and epileptic fits, which continued for a year. When the portion of depressed bone was removed, and when the trephine had sawed through the bone, the surgeon tried to raise it, but could not; at last, with some difficulty, it was detached, and on examining it, a thorn of bone was found attached to it, which had penetrated the brain, exciting epileptic fits. He had only one fit after, and completely recovered. But the next case is the most extraordinary that I am acquainted with, and I am surprised it has not had a greater effect on the public, in a medical and physiological point of view. A man was pressed into His Majesty's service, early in the beginning of the late revolutionary war. He was taken to the Mediterranean, and there received a fall, I believe from the yard-arm; he was picked up on the deck, insensible. The vessel soon after made Gibralter, and he was put into the hospital there, where he remained some months, insensible; he was then brought on board the Dolphin frigate, to Deptford; the surgeon who attended him there, was one day visited by Mr. Davy, a dresser of this hospital. The surgeon said to Mr. Davy, "I have a curious case of a man who has been insensible for a long time; his breathing is rather laborious, his pulse natural, and it corresponds with the working of his fingers; but he lies on his back, deprived of volition and sensation." Mr. Davy accompanied the surgeon to see him, and he found that there was a slight depression of the head. Mr. Davy said, "send him to St. Thamas's Hospital;" he came, and was under the care of Mr. Cline. He was found lying on his back, breathing with considerable difficulty, with regular pulse, and each time the pulse beat, the fingers moved, so that you might tell his pulse by his fingers—If he wanted food, he moved his lips or tongue; that was the sign. Mr. Cline found a depression, and operated upon him. *Thirteen months* and a few days after the accident, he was operated on by the trephine; and the depressed portion of bone was elevated.—Whilst laying on the table, so soon as the portion of bone was raised, the fingers immediately ceased working. The operation was performed at one; and at four in the afternoon, I was going round the wards, and saw this man raised on his pillow; I went up to him, and said, "have you any pain?" he put his hand to his head: volition and sensation had returned, and in four days, he got out of bed, and conversed; in a few days more, he told us where he came from, of his being pressed, of his being carried down to Plymouth, or Falmouth; but from the moment of the accident, thirteen months and a few days, oblivion had come over him; all recollection had ceased; he had, for that time, drank of the cup of Lethe; and there had been cessation of almost all the bodily and mental functions; yet, on removing a small piece of bone, he was restored to his powers of mind and body. Thus, you will see, that you must not be deterred from performing the operation by *any length of time*, for still you may be able to restore the powers of the mind and the body."*

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* See our remarks on Dr. Kellie's paper, in another part of this number, respecting pressure on the brain from trepanning.—Rev.

We shall occasionally introduce the opinions of this celebrated surgeon and teacher, when surgical points are under discussion, for the benefit of those at a distance from the metropolis. Sir Astley has permitted his lectures to become public property through three, if not more, separate channels, and, therefore, there is no longer any delicacy necessary in quoting them *pro bono publico*.

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* Scalpel, p. 79—80—81.

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2. *Extirpation of the Thyroid Gland.* A terrible operation of this kind was lately practised by Dr. Graef, of Berlin. The patient was twenty-two years of age, and the thyroid tumour had been growing from the age of fourteen. It was now an enormous size—as large as a child's head! They first tried ligature of the superior thyroid artery; but this was followed by alarming symptoms, as insupportable headach, and violent pains in the neck, and in the tumour itself. The patient loudly demanded extirpation of the gland, and Mr. Graef consented to the enterprise. We cannot detail the steps of the operation, but it will convey some idea of the difficulty experienced, when we state that it was necessary to take up forty-three arteries, and that the tumour, when removed, weighed two pounds and a half!—The operation lasted half an hour, and was followed by complete success. —*Heden on the Thyroid Gland.*

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3. *Dr. Civiale's Lithontriptor.* It was but lately that we presented our readers with the experiments and proposals of Messrs. Prevost and Dumas respecting the dissolution of calculi in the bladder by means of the galvanic fluid. Since that period, a still bolder flight has been attempted, and the long imagined, but never effected, operation of breaking down calculi in the bladder by means of an instrument, has, it is said, at length taken place. Messrs. Chaussier and Percy have been deputed to examine into the merits of this operation, and have reported to the Royal Academy of Sciences accordingly. Several people have already put in their claims for participation with Dr. Civiale in his invention, and some even claim priority. It is stated, indeed, by M. Percy, that the project was announced in the Saltsburgh Medical Gazette, so far back as 1813, by Dr. Gruithuisen. It does not appear, however, that the German ever put his proposals into execution, and therefore the more substantial merit of actual reduction to practice belongs to Dr. Civiale.

The first principle or condition of the operation consists in dilatation of the urethra, and the introduction of a *straight sound* into the bladder. This last is indispensable. Through the straight and hollow sound is introduced another, containing a steel apparatus consisting of three elastic and curved branches, to seize and fix the stone when projected. This, of course, is an old invention. Within this last apparatus is a steel stilet, at the extremity of which is a circular saw, which can be worked upon the stone, till it is destroyed by repeated drillings. We shall give a short description, however, in the original, as it is not easy to reduce the French technicals into English.

"C'est encore une sonde, mais une sonde d'acier pouvant entrer dans la première, droite et creuse comme elle, et portant trois branches très-élastiques, courbes, restant rapprochées et invisibles tant qu'elles sont enfoncées dans la sonde principale, qui leur sert gaîne, et quand on les pousse au dehors, s'épanouissant par l'effet de leur ressort, et formant comme une cage, une bourse d'acier où l'on parvient plus ou moins vite à faire entrer la pierre, sur laquelle on la ferme aussitôt en retirant la sonde à soi, c'est-a-dire en arrière, autant que le volume du corps étranger, ou le sens dans lequel il a été chargé, peuvent le permettre.

" Dans la seconde sonde, ou plutôt dans le cylindre formant la pince, est un long stylet d'acier, qui y entre et peut y tourner librement, et qui se termine, du côté de la vessie, et entre les serres de la pince, par une lime en fraise, ou par une petite scie circulaire, un trépan pyramidal, un simple carlet, selon la circonstance, la grosseur et la nature présumée de la pierre. Celle ci étant bien fixée, on pousse contre elle le stylet mobile, et au moyen d'une poulie dont il est pourvu à son extrémité extérieure, d'un tons d'horloger sur lequel on le monte, et d'un long archer à corde de boyau, on le fait tourner comme quand on veut percer un trou dans une plaque de métal." A peine la machine est en activité, qu'on entend le bruit sourd, ou sonore du broiement ou du brisement qui s'opère sur le calcul, selon la mollesse ou la dureté dont il jouit, et le patient ne manifeste que très-peu ou point de douleur.

" A mesure que le travail avance, on fait marcher dans la même proportion le stylet contre la pierre, en suspendant un moment l'action de l'archet, que l'on reprend bientôt, pour comminuer de plus en plus la concrétion ennemie, et hâter, si l'opérateur ou le malade ne sont pas trop fatigués, l'œuvre de sa destruction, laquelle, ne devant s'achever qu'à deux ou trois reprises, est ajournée à des termes plus ou moins rapprochés. Une miction spontanée ou une injection d'eau tiède dans la vessie termine ordinairement la séance, et fait rejeter par l'urètre, qu'a dilaté la grosse sonde, des éclats, des fragmens plus ou moins nombreux et considérables, ou du sédiment borbeux qui se précipite bientôt et qu'on peut recueillir aisément."

The operation has been performed many times on the dead, and sometimes on the living body. The bladder is secure from the effects of the terebration, and it is asserted that no danger can arise from the operation. After having witnessed three operations on the living body, Messrs. Chaussier and Percy conclude thus :—" after all that has passed —and wishing to steer a middle course between enthusiasm which exaggerates, and distrust which repels every invention, we are of opinion that the new method proposed by Dr. Civiale for destroying a stone in the bladder is equally glorious for French surgery, honourable to its inventor, and consolatory to humanity ;—and that, notwithstanding its inefficacy in some cases, and the difficulty of its application in others, it cannot fail to form an epoch in the annals of the healing art, and be regarded as one of its most ingenious and precious resources."

It would be wrong in us to hazard any prognostication on an operation which has been actually performed several times on the living body, before such competent judges as Chaussier and Percy; but yet we cannot help fearing that the difficulty of introducing a *straight sound* large enough to contain efficient pincers to secure, and borers to penetrate a stone of any magnitude in the bladder, will be such as shall prevent its ever coming into general use. Time, however, will tell—and most sincerely do we hope that we may turn out to be false prophets upon this occasion. We will, however, hazard a conjecture that the forceps for extracting *small stones*, suggested by Sir Astley Cooper, and constructed by Mr. Weiss, will prove of far more general application than any instrument for the destruction of stones of magnitude in the human bladder—unless such instrument be introduced through an opening into the urethra made *in perineo*. In this last case, we think it probable that an apparatus of considerable power might be passed into the bladder, and made to act upon a calculus there.

P.S. It is curious, that a general who was operated on for stone, a few years ago, planned out to the writer of this article, an apparatus almost indentically the same as that constructed by Dr. Civiale; but he was not aware that a straight sound or instrument could be introduced into the bladder.

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4. *Stricture of the Urethra.* Mr. Arnott [Med. Chir. Trans. vol. xii.] has lately called the attention of the surgical profession to the treatment of old and narrow stricture, by incision, in preference to destruction of the parts by caustic, or forcing the obstruction by mechanical means. He relates a case in elucidation.

The patient (forty-nine years of age) had suffered from stricture of the urethra for fifteen years, and, during the last four, had not been able to get a bougie into the bladder. When he came to M. Arnott, he was found to make water every hour, attended with much straining and pain; the urine coming only *guttatim*. A bougie was stopped towards the bulb of the urethra, and could not be got further, notwithstanding several trials. The caustic was next applied, but without benefit. In consultation with Mr. Shaw, an operation was determined on. A catheter being introduced down to the obstruction, a free external incision was made upon its point, and an opening made into the urethra, anterior to the obstruction. The point of a very small grooved probe was then guided into the aperture, and pushed on towards the stricture, into which it entered with little difficulty, and went on to the bladder. Upon this a bistoury was run down, and the strictured portion divided, occupying about a quarter of an inch in extent. The catheter was now carried onwards, with great facility into the bladder, and upwards of a pint of urine was drawn off. No unfavourable symptom occurred. On the fourth day the catheter was withdrawn (as urine passed between it and the urethra) and it was replaced by a larger sized one of elastic gum. This was again replaced by one of silver, still larger. The wound healed favourably, and was quite closed by the end of a fortnight. The catheter was then withdrawn during the day, the patient now being able to make water in a full stream. The instrument, however, was worn at night, for another week, when it was left off, and a bougie introduced occasionally.

For Mr. Arnott's observations on the advantage of such an operation over caustic, or what is called forcing the stricture, we must refer to the paper itself. His observations appear reasonable.

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5. *Extropopharynx.* This is a hard name for an instrument, to be used in a hazardous operation—œsophagotomy. When foreign bodies become lodged in the œsophagus, and we cannot extract them by the mouth, or push them down into the stomach, it is evident that there is no other resource than cutting into the œsophagus, for the extrication of the obstructing body. M. Vacca-Berlinghieri, of Pisa, proposes an instrument resembling a catheter, but rather stronger, to which he gives the above name, and which, being introduced down to the obstruction, is to be pressed outwards, by pushing the handle in an opposite direction, as we push the staff to one side in the operation of lithotomy. By this process, het hinks, we may cut down on the projecting œsophagus with much less danger of wounding nerves or blood-vessels.

For our own parts, we do not see what greater advantage or facility there is in cutting down upon a catheter in the gullet, than upon the obstructing body itself. The *latter* must always form a projecting point and guide for the knife. Besides—in operating according to Berlinghieri's plan, the opening into the œsophagus must necessarily be *above* the obstruction—whereas, in the common way, we cut down upon the very spot where the foreign body is lodged.

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6. *Stricture of the Urethra.** Mr. Shaw does not attempt to embrace, in this paper, all the effects of stricture, but confines himself to the following four pathological facts.

"1st—I have not," says he, "in more than a hundred dissections which I have made of diseases of the urethra, seen a stricture or narrowing of the canal, posterior to the ligament of the bulb; nor have I been able to find one example of stricture beyond this part among those preserved in the College Museum.

"2d—In almost every instance where a narrow stricture has existed for some time, in any part of the urethra anterior to the ligament of the bulb, I have found the membranous and prostatic portions dilated to three or four times their natural size.

"3d—The ducts of the prostate, which are naturally very small, are always more or less enlarged when there has been a stricture or long-continued irritation of the canal.

"4th—When such a stricture as causes occasional retention of urine has existed for some years, the bladder is found to be not only thickened, but often at the same time sacculated." 463.

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* On the effects of Stricture of the Urethra, particularly of the sacculated state of the bladder, with an inquiry into a mode of treatment to avert this latter consequence of Stricture, which is often fatal. By John Shaw, Esq. [*Med. Chir. Trans. Vol.* XII.]

If the first three observations be correct, some practical rules may be deduced from them. Thus, if in passing down an instrument, we meet with obstruction *posterior* to the ligament of the bulb, we ought not to impute it to stricture of the passage, but to some other cause, not removable by the means employed for stricture. In respect to the second observation, that the membranous and prostatic parts of the urethra become enlarged in consequence of stricture; if such be the case, it will be admitted that obstruction to the bougie posterior to the bulb, in a patient who has previously had stricture anterior to it, will render it improbable that such obstruction results from narrowness or stricture of the canal. The rule to be deduced from these observations is, that on feeling an obstruction posterior to the ligament of the bulb, we should not persevere in the attempt to push the instrument further in. It is probable, in such cases, that the point of the instrument is entangled in one of the dilated ducts, in which case, any attempt to force the catheter into the bladder may probably form a false passage. If the catheter enters into one of the enlarged ducts, Mr. Shaw observes, it may be pushed through the prostate into the back part of the dilated bladder, several preparations of which accident are in the collection in Windmill-street. These observations, he thinks, are necessary when, even in the present day, the authority of Dessault is given for using forcible means to overcome obstructions on the prostate part of the urethra.

Our author next adverts to the anatomy of the parts, and shows that from the sudden narrowing of the canal at the bulb—and the curve which it naturally takes there, the mechanical impediments to the introduction of an instrument at this point, are greater than at any other.

"If to these impediments we add the difficulty occasioned in the living body by the contraction of the muscles which surround this part of the urethra, and which is always excited by slight inflammation of the membrane, we shall understand how the spasmodic affection, which comes on the moment the bougie touches the inflamed part, combined with what I have called the mechanical difficulties, may produce so complete an obstruction to the entry of an instrument, as to give rise to the idea of the presence of stricture." 467.

Error may be increased on these occasions, by seeing a cut or indentation on the bougie, caused by pressure against the lower edge of the ligament exactly resembling that which is considered as unequivocal proof of stricture. So much delusion has indeed prevailed respecting the existence of stricture, that we are not much surprised at the histories which are published of sudden cures of narrow strictures at the bulb, by bleeding, antispasmodics, &c. It is also not improbable, as Mr. Shaw observes, that actual strictures at the bulb have originated in the inflammation consequent upon the ineffectual attempts to pass an instrument through this part of the urethra, while its lining membrane was in a state of irritation.

In respect to the sacculated state of the bladder, it is observed by all who are in the habit of examining the urinary organs after death, that this condition is a very common occurrence where stricture has existed. Although our author is unable to point out any particular diagnostic symptom, by which the sacculated state of the bladder can be known during life, yet he ventures "the opinion that, when in severe cases of stricture there is a peculiar irritation about the back part of the bladder, and between it and the rectum, especially after voiding urine, we may suspect that a sac has formed."

The questions then occur—is such a sac ever spontaneously removed? Will not a quantity of urine lodge there?—and what will be the consequence of such lodgment —The *first* question, Mr. Shaw thinks, can never be answered with certainty—the *second*, he fears, must be answered in the affirmative—and, as to the *third*, and most important, he would be inclined to say, that "the lodgment of urine in a sac produces a very peculiar train of symptoms, constituting a disease that is often fatal, the patient's death being occasionally preceded by symptoms of peritonitis." Mr. Shaw has also observed that the sufferings of the patient are of a nature very different from what are considered the more common consequences of stricture.

There is reason also to fear that these lodgments of urine in sacs of the bladder may cause the formation of calculi there. Another consequence, scarcely alluded to by authors, is a fistulous communication between the rectum and bladder, sometimes resulting from the formation of a sac in the bladder—more usually from a sacculated state of the prostate Both of these have their origin, generally, in stricture. The important fact, too, must not be overlooked, that the prostate itself is very liable to become sacculated, even without the presence of stricture. The next object of inquiry is, can we avert the above-mentioned consequence of obstructed urethra?

Suppose a patient has had stricture near the bulb for several years, which has resisted every plan of treatment, and now will not permit the passage of the smallest bougie. The patient has frequent attacks of inflammation of the bladder, and the water dribbles away slowly, or is passed guttatim. The usual means, we say, having failed, what can we hope for but a suppuration in the perineum, and a fistulous opening for the water, as the most favourable issue, bad as it is? In the state above described, it is evident that (while the obstruction continues) the patient is daily liable to complete retention of urine, from catching cold, or any irregularity.

"If this should happen what must be the consequence? The state of the stricture is such, that neither a catheter nor a bougie can be passed; therefore, if the patient be not immediately relieved, and this with great care, by cutting into the perineum, or by puncturing the bladder, he must either die of the irritation caused by the distended bladder, or the urethra will burst behind the stricture, and the urine necessarily in a highly acrid state, be effused into the scrotum. If this last should be the result (which it too commonly is in such cases) and if the patient be not then treated with skill and decision, he will probably die in the course of three days; or, should he escape the immediate danger, he will run much hazard of sinking under the extensive sloughing of the scrotum and penis, which almost invariably follows rupture of the urethra, when a free passage for the evacuation of the effused urine has not been made." 473.

Even if things do not go the above length, from complete retention, yet the constant state of irritation in which the bladder is kept, will either lead to irritative fever of a dangerous and wasting kind, or induce a disorganized or sacculated state of the prostate gland, or of the bladder itself, under which the patient will ultimately sink. What is to be done, Mr. Shaw asks? Should a catheter be forced through the stricture, or should the bladder be punctured? The first is decidedly wrong, he avers, because the contracted portion of urethra is probably much firmer and stronger than any other part of the canal. Puncturing the bladder would be infinitely safer, but it would give only temporary relief.

Mr. Shaw proposes an operation, then, which is not severe, nor attended with danger, if properly performed—which will not only give temporary relief, but also put the patient into a condition of much greater ease and comfort than could be expected. The operation "*is merely to cut through the stricture, to introduce a catheter from the glans, and endeavour to make the urethra entire—by allowing the wound to granulate over the catheter.*" It is to be remembered that this operation is not proposed for the spur of the moment, when the patient is in danger from retention of urine. It is to be performed before things come this length, and before danger is so imminent. The only difficulty, Mr. Shaw remarks, likely to occur in the first stage of such an operation is, the chance of the point of the catheter getting into one of the false passages, when passing it down to the stricture, as a mark for our incision into the urethra In the second stage of the operation, we may have some difficulty in discovering the opening of the urethra, after the stricture is cut through, for there may be false passages continued even beyond the point of stricture—or the urethra, by its elasticity, may be so close that we cannot see it. These difficulties have occurred in one or two cases, but are surmounted by observing the point from which the urine issued. For this purpose the urine ought to be retained for some time previously to the operation. If this cannot be done, we are to desist from prosecuting the operation till the bladder again fills, when we are to narrowly watch the issue of the stream, and pass a catheter through the opening into the bladder. It is scarcely necessary to add that, after the wound has healed over the catheter, the urethra must, for a considerable time, be kept free by the use of the bougie. The worst evil that could befall this operation would be the non-closure of the wound—in other words, a fistulous opening in perineo. But even *this* is the best accident that could befall the patient, if the operation were not performed Again, the fistula, after operation, would differ materially from a spontaneous one. Thus the stricture would be removed, which is the first step towards the cure of fistula, and there would be only a simple wound in place of the multitude of callous

sinuses which take place in spontaneous fistula. Our author concludes by recommending the early performance of such an operation, before the parts get disorganized and hardened. He has lately seen a patient on whom this operation was performed, and his appearance was so much altered for the better, that he scarcely recognised him. Previous to the operation he was so reduced by constant irritation, that he appeared like a broken down man of sixty—but now he is a hale and strong-looking man.

We think Mr. Shaw's paper is entitled to the serious attention of his surgical brethren, and himself to the thanks of the profession.

IV.

THERAPŒIA.

Pharmacâ nulla valent, nisi quæ sint commoda causis.

1. *Hydrocephalus Internus.* In the last number of the Edinburgh Medical Journal there is a short, but in our minds, an important communication on the subject of hydrocephalus *internus*, or as we would term it, hydrocephalus *acutus*, from the pen of Dr. Maxwell of Dumfries. Previously to our author's entrance on private practice he saw about twenty-five cases of this disease all terminating fatally. He naturally concluded therefore that the *methodus medendi* was inefficient, and that some new or more active mode of treatment must be resorted to, if success were to be looked for. In many of these fatal cases the little patients had been bled with leeches and from the arm—purged, &c. It was therefore determined to abstract blood in a more bold and decided manner than had yet been tried. Out of about ninety cases treated in the manner to be described, sixty recovered—a proportion greater certainly than is usually observed in ordinary practice.

Dr. Maxwell has selected only two cases out of nearly ninety, in order not only to show that the disease was really hydrocephalus acutus, as far as symptoms can prove, but also to illustrate the mode of practice pursued. One of these two cases will be sufficient for our purpose.

"Master J., æt. 7, a healthy boy, became dull and indisposed to his usual exercise, complaining of headach, which with much languor, increased during six or eight days. The bowels were frequently moved by purgatives. At this period pain in the head became more distressing, and the bowels were difficultly moved. The boy showed no inclination to leave the house;—he rested frequently his head in his hands upon a table, or in a kneeling posture on a chair; the muscular power of his limbs began to fail; the pulse became rapid; pain of the head excessive, with occasional remissions, and during these, constant drowsiness came on. Still, however, there was a considerable disposition to take food, although it was passed half digested. The mind now became indistinct, with inability to articulate; vision was imperfect; the evacuations took place without his attention; squinting next appeared;

pulse 160—frequent expression of pain in the head; muscles in the neck became supple, the head rolling upon the breast and shoulders, with immobility of the pupils and total want of expression in the eyes; the face pale and inanimate. Mr. J., his father, a medical gentleman, requested that I would take the sole direction of the case, observing, that he was well aware that extreme bleeding was the only means by which the child could be recovered, desiring that it might be carried to whatever extent it might be thought necessary, and that, if the child should sink under such active treatment, he would still retain a warm sense of gratitude for the painful task which he had imposed on me. The time was fixed for the operation, and, with the father's consent, I invited my medical friends Dr. G., Mr. S., Mr. M., and Mr. St., to be present. The father, after providing every thing necessary, withdrew to a remote part of the house, waiting, with the anxiety of an affectionate parent, the fate of an only son.

"The boy was laid on a mattress, his head somewhat lower than the rest of the person, medical gentlemen holding each wrist; the jugular vein on the right side was opened; it bled rapidly—the stream was frequently interrupted to prevent fainting. The bleeding was continued till syncope began to take place: a little negus was then given; when the pulse revived, the finger was removed from the orifice and the blood allowed to flow till the gentlemen agreed that the pulse could no longer be felt. The patient at this time had no appearance of life, and continued without the least symptom of animation for ten minutes, when he began to revive gradually: and in the evening more favourable symptoms appeared. His mind was remarkably improved, as well as his physical powers, being now able to articulate, although indistinctly, and to tell the hour on a watch. He had a tolerable night's rest, having taken frequently a little water-gruel and beef-tea. During the following day there was but little improvement. On the third day the bleeding was repeated in the left jugular vein, and a complete recovery followed." 13.

We think this document is highly deserving the attention of our brethren. Before water is actually effused—at least to any extent—bleeding must be the paramount measure, whether in young or in old.

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2. *Prevention of Drunkenness.* Our readers are aware that the volatile alkali has been considered as a *remedy* for intoxication. We said, in a former number, that should this be the case, it is doubtful whether the antidote would not encourage the vice rather than tend to suppress it. In one of the foreign Journals it is stated that a German Physician (M. Brulh-Cramer) has discovered that the exhibition of diluted sulphuric acid, with occasional bitters, causes, at length, such a disgust towards brandy and other spirituous potations, as to eradicate the disposition to inebriety. If this should prove true, it would be a far more valuable discovery than that of a medicine which rendered a drunken man sober, and enabled him to return to his favourite potations with impunity.

3. *Cholera of India.* This terrible epidemic is spreading westward. It is already on the very confines of Europe, and will probably visit us before it ceases its ravages. Mr. Cormick writes from Tabriz, in Persia, under date of October 1822, at which time the cholera had got to the Western boundary of Persia, and was steadily advancing in the same direction. This gentleman confirms the general observation that, "there is not a vomiting and purging of bile, but of a whitish water, without taste or smell, resembling that in which rice had been boiled." Until alvine evacuations, of "a dark colour or bilious nature," were procured, no cure could be anticipated—"and this object gained, two-thirds of the difficulty and danger of the disease are removed." This was discovered and proved many years before the epidemic broke out, by observations on sporadic cases in India.

"Calomel, sometimes alone, sometimes combined with opium, and opium alone, had this effect. Occasionally, when all these failed, injections, twice or thrice repeated, of laudanum and warm water, or rice water, one drachm in a pint, succeeded. I always gave calomel the first trial, as it possessed the additional advantage of bringing on a healthy action in the liver, (which was gorged with blood) and a secretion of bile, more readily and more effectually than any other medicine, with which I am acquainted. As soon as the state of the stomach admitted of it, I gave six to ten grains of calomel, with ten grains of compound extract of colocynth, every hour, administering at the same time a stimulating injection, generally of salt and water. This medicine I used, as being small in quantity, it was less likely to bring on a recurrence of the vomiting. After three or four repetitions of it, if copious evacuations were not produced, which was seldom the case, I gave an ounce of castor oil, with as much peppermint water, every hour, till this object was attained." 361.

Bleeding could not be attempted before some degree of reaction came on. It was then "of infinite use in relieving the head, removing the disposition to coma, and facilitating the return of the healthy secretions of the hepatic system." The same observations apply to warm bathing as to blood-letting. Latterly Mr. C. was led by experience "to place most confidence in pieces of blanket moistened in water, almost boiling, and constantly rubbed and tied about the legs and arms." Mr. C. ridicules the idea of the disease being contagious. He saw not an atom of reason for such an opinion. Speaking of Tabriz, Mr. Cormick observes,

"The atmosphere is generally clear, cold, and healthy; and if, in such a climate, this epidemic commits such ravages as almost to equal its effects in many parts of India, I much fear it will extend to Europe, where the crowded cities and great population will make it more severely felt than it has been in the scattered cities and scanty population of Persia." 365.

We should not be surprised if Mr. Cormick's apprehensions be one day verified.—*Med. Chir. Trans.* v. xii.

4. *Purpura Hæmorrhagica.* Dr. Whitlock Nichol has related another case of this kind "successfully treated with the oleum terebinthinæ." The patient was a young country girl, nine years of age, who had been in a delicate state for several months. On the 3d of March, petechiæ appeared on the surface of the body generally—on the 5th, the gums began to bleed. 7th. The urine became bloody. 8th. Discharge of blood from the bowels. 9th. Our author visited her, and found her in a state of great languor—the skin studded with purple spots, intermixed on the legs with oval patches of ecchymoses. The urine and stools were full of blood, and this fluid was constantly oozing from the gums. Pulse 130 to 140. A six ounce mixture, containing an ounce of oil of turpentine, was ordered to be taken in doses of one table-spoonful every hour until some mitigation of the general hæmorrhagic disposition, after which the dose was to be given only every two hours. A turpentine clyster was also directed to be thrown up. Next day the symptoms were ameliorated. In two or three days the blood disappeared from the secretions and excretions, but the gums did not entirely heal for near a fortnight.

Dr. Nichol proposes that Captain Parry may be furnished with a cask of oil of turpentine to cure sea scurvy in the Arctic Regions. If Dr. Nichol had ever witnessed sea scurvy, its causes, progress, symptoms, and termination, he never would have made such a proposal.—*Med. Repos. No.* 6.

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5. *Pharmaceutical Agents.* The impropriety of using any but the proper officinal names for pharmaceutical preparations, will be illustrated by the following ludicrous mistake. Dr. Vavasseur, in translating Mr. Cæsar Hawkins's paper on Syphilitic Ulcers of the Larynx, into the ARCHIVES GENERALES, comes to a part where Mr. Hawkins details a most dangerous and formidable case saved by large quantities of the "*Lisbon diet drink.*" This is a puzzler to Dr. Vavasseur—and after racking his brains, he translates it—"*shin-of-beef soup,*" adding the following learned note at the bottom of the page.—

"Ce qu'on nomme en Anglais *diet drink*, est une *decoction très legere de viande de bœuf;* mais j'ignore quelle est la modification particuliere dont il s'agit, indiquée par le mot *Lisbon.*"

This treatment of syphilitic ulcers, in England, by "*shin-of-beef soup*" will now make the tour of Europe at least, and excite no small merriment and surprise among the wits of the continental profession, who will never dream that Mr. Hawkins meant the compound decoction of sarsaparilla.

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6. *Acute Rheumatism.* M. Gosse of Geneva, has published a case of acute rheumatism treated by calomel and opium to ptyalism, with a couple of bleedings. The rheumatism ceased as soon as salivation was established. There is nothing new in this. But it appears M. Gosse has made some chymical experiments on the blood of persons under the influence of mercury, and found such blood contained much less of

albumen than other blood—that there was less cruor—that it was more liquid—and, in short, less inflammatory.

Dr. Farre, Mr. Travers, and many others, have long entertained similar opinions; but we are not aware that chymical experiments have been made on the blood of persons who had taken mercury in this country. The subject is worth pursuing, and is not difficult to investigate.

7. *Tartrite of Antimony in large Doses.* In our last Periscope, we gave the experience of Dr. Fontaneilles on the practice of Rassori, in acute diseases. We have now (Archives Generales, Avril) the testimony of the celebrated Laennec, as published by his pupil Dr. Delagarde. Several cases are related by the latter, as treated in the Clinique of La Charité. But Laennec does not trust entirely to antimony in pneumonia. He prescribes moderate blood-letting. And whereas Rassori commenced with doses of 24 grains of the tartrite of antimony in the twenty-four hours, Laennec begins with four or six grains dissolved in four or six half-glassfuls of orange flower water well sweetened, in the day and night—gradually augmenting the dose according to the "tolerance" evinced by the patient. In exhibiting this medicine, indeed, we have no other guide but experience in the individual case.

Of the above solution Laennec exhibits half a glassful every two hours. Frequently the first dose determines evacuations, upwards or downwards—and frequently the second dose checks these evacuations—if not, the third or fourth. We need not despair of seeing the "tolerance" established, unless excessive evacuations continue longer than this period, when, of course, we should desist. On the second day, (if the medicine be well borne the first) the quantity of the antimony is augmented, or even doubled. Where it is not well borne, M. Laennec is in the habit of combining some syrup of the white poppy with the menstruum. It is very rare, says Dr. Delagarde, that complete tolerance is not established by the second or third day, after which, the doses of the medicine may be carried to a very great height, without any inconvenience—till a certain period, of which no prediction can be formed, when the smallest quantity of the medicine cannot be borne. It is then to be entirely left off.

The cases published under Dr. Laennec's authority, and which are sufficiently numerous, of pulmonic inflammation treated principally by antimony, but assisted occasionally by venesection, do not impress us very favourably with the plan pursued. They were much more tedious than cases of the same description usually are in this country—and this, we think, is a very serious objection, considering how desirable it is to clear the chest as soon as possible of inflammation, when it exists, in order to prevent any change of structure in the lungs or their investing membranes which may afterward predispose to the same or to other more formidable diseases. M. Laennec, it appears, has employed the same plan, not only in acute pneumonia, but in apoplexy, articular rheumatism, acute hydrocephalus, chorea, and other maladies. To this mode of treatment in any of the above diseases, excepting rheumatism and chorea, we have to urge the same objections, *a fortiori;* because the *cito* is almost indispensable for the *tute* in such cases. At the same time we think that the verification of Rassori's plans in other parts of the continent besides Italy, ought to prove a sufficient inducement to practitioners in this country (in hospital practice—for we think it generally inapplicable to private practice, on account of the watchful attention required in each case) to avail themselves of a more extended use of antimony as an auxiliary in acute inflammations. It is with this view we have laid the above observations before our readers, as an appendix to the article at page 221 of this volume.

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8. *Emetine in Violets.* As the bee extracts honey from the most poisonous plants, so vegetable chymistry promises to extract poison from the most mellifluous. In this respect, "the poisonous henbane and the fragrant rose" will soon be on a par. M. Boullay has analyzed the *viola odorata,* and found it to contain an active alkaline bitter and acrid principle, similar to the emetine of ipecacuanha. This he denominates the *violine.* Orfila has proved it to possess highly poisonous qualities. This principle resides equally in the root, leaves, flowers, and seeds, united with a malic instead of a gallic acid.

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9. *Injection of Tartar Emetic into the Veins.* Dr. Meplain of Doujon, was the hardy experimenter on this occasion. The subject was a young woman who had suffered from her infancy from worms, but in other respects was healthy. For several days previously to the report, she had had irregular and voracious appetite, and yet disgust at the sight or smell of food. Her nights were disturbed by frightful dreams, and she had frequent inclination to vomit. After a fatiguing journey she was seized in the evening with fever, intense headach, eructations, wandering pains in the limbs, cramps in the legs, delirium, grinding of the teeth. Next day, hysterical symptoms, convulsions, jactitation. In the second night, loss of consciousness, rigidity of the limbs. When Dr. M. arrived, he found the patient completely immobile—eyelids raised—eyes fixed—pupils contracted—head bent backwards—jaws locked—limbs tetanically rigid—pulse scarcely perceptible—skin cold—abdomen soft—urine white.

Dr. M. attributed these symptoms to the presence of worms in the stomach, or their attempts to ascend the œsophagus. He therefore endeavoured by various means, to dislodge them by vomiting, without success. He next determined on the injection of an emetic into the veins. By means of a hydrocele syringe, he threw into the median vein six ounces of whey, holding in solution four grains of tartar emetic. The patient exhibited no sign of sensibility during the injection. In about twenty minutes, the eyes and lower lip began to move, and soon afterward vomiting came on, and brought away eight lumbrici rolled up in a ball, all living. There was now a striking amendment of the patient's condition. The rigidity of the limbs ceased—the pulse became stronger. She again vomited, threw off two lumbrici of a larger size, after which she began to articulate, and soon recovered, having vomited a third time, and brought away several more lumbrici, and much bile.—*Journ. Comp. des Sciences Med. Fev.*

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10. *Cases of Masked Intermittents.* By M. Bourquet, Surgeon in Chief to the Hospitals of Béziers.*

Case 1. M. Bourquet was summoned to Fa——, in the mountains, to see a male child, nearly 8 years old, with the following symptoms: Immediately at sunrise he appeared to die away, and revive again at sunset. M. B. wished to see these phenomena in person, and went to him at six o'clock in the morning, (it was winter) awoke him, and chatted with him until about sunrise, when the little invalid, hitherto lively, lay down and soon appeared quite dead. No sensible respiration, no pulse, no beating of the heart, no feeling even when pricked. The body grew colder considerably for at least two hours, after which the cold diminished, without entirely ceasing; the only sign of life was a convulsive twitching of the right upper eyelid. One of his arms was forcibly raised, it remained so; a leg, the same. His limbs were like soft wax which takes any form that is given to it. Thus he continued, without swallowing any thing, until the sun sank beneath the horizon, when he gradually recovered his senses without any sign of having been ill.

He had had two similar attacks previously, treated unsuccessfully with stimulants, rubefacients, &c. Bark in combination with sublimed zinc was ordered; during the night, this was taken to the amount of an ounce; no paroxysm appeared the next day, nor has any since.

Case 2. Mademoiselle J. T——, of Béziers, felt every day, precisely at 2 o'clock in the afternoon, a kind of epigastric cramp, which, after half an hour, induced so forced and loud a laugh that her mother thought her mad. This immoderate laughter continued eight hours, and was terminated by a sweating stage, when tranquillity reappeared. The friends were not a little surprised to see these "laughing fits," as they called them, disappear under the use of bark, after baths, blood-lettings, and debilitating drinks had been employed in vain.

Case 3. Miss Fi— An— of C——, experienced, for two days, a chorea so violent, that she leaped continually, during more than two hours, half a foot high; striking herself; struggling in every direction; with incessant hiccough and contortions, until at length, worn out with fatigue, she sank upon a sofa, where a most profound slumber terminated the paroxysm. Her ordinary medical attendant ordered the application of leeches, which procured no amendment. M. Bourquet, considering the disease as similar to that of the former cases, employed the bark; the success was complete.

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* Gazette de Santé. No. xvii. Juin.

Case 4. Miss V. F———, of Béziers, felt, exactly every Thursday, dreadful colicky pains, with inflation of the lower belly; pulse hard; respiration laborious; convulsive motions perceptible. By turns, diluents, evacuants, and leeches, were essayed: nothing could ward off the attack. The intermittent character of the disease clearly called for bark: This was administered on the eve of the day when the paroxysm should come on; it did not appear and the patient was perfectly cured.

Case 5. M. Mignard, of Sauvian-les-Béziers, was attacked with febrile delirium, and soon an anthrax appeared on the thumb of the right hand. An opening was made at the end of the thumb, and the digital artery, being aneurismal, gave out, by a jet synchronous with the pulse, some quantity of blood. Compression stopped the hæmorrhage: it reappeared; again it was stopped, again it appeared; and M. Bouquet was called in either to tie the digital artery, or to amputate the thumb, if the case required it. This was on the day of the hæmorrhage, and it was remarkable that the discourse of the patient was vague and confused. It struck M. B. that this periodical bleeding was but the symptom of some nervous paroxysm, which was renewed every second day. The pulse was hard and sharp, and in the thumb affected, pulsations extremely violent were felt: the radial artery seemed to participate in the dilatation. The bare finger was applied, after having compressed the artery at the wrist, and the blood stopped by dossils sprinkled with agaric, a bandage and a tourniquet in readiness upon the radial. The next day, Wednesday, the patient was easy: on Thursday, the bleeding reappeared. On Friday, the following boluses were given: powdered bark 1 oz. extract of bark 1 dr. salt of bark ½ dr. made up with syrup of bark into 8 portions, one to be taken every four hours. The patient took them on Friday. *Saturday*, no hæmorrhage, no delirium, extraordinary heat. The thumb was examined and the eschar removed, but not a drop of blood made its appearance. The cure was complete.

Periodicity should be carefully watched in all anomalous diseases; for the treatment requires, in general, to be reversed, when the intermittent nature of a complaint is ascertained. We have known much suffering and some danger incurred, in consequence of mistaking periodical paroxysm for occasional exacerbations of febrile diseases.

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11. *Of Madeira, its Visiters, its Climate, and its Diseases.* Dr. Heineker of Funchal, Madeira, has published some observations upon these important subjects, and we regret extremely that the playful puerile way in which he has discussed them, induced us to look with an eye of severity upon his observations, which certainly contain many useful and we doubt not well-founded opinions upon the climate of Madeira, and more particularly upon the transference of patients, labouring under phthisis, or threatened with its attacks, from our own shores to that place. The careless apathy with which patients are frequently con-

demned to transportation, to separation from their friends, and to considerable expense, in a state of suffering which no change of climate can remedy, has frequently excited our regret, and we should be infinitely indebted to any man for a *serious* statement of the particular species and stages of pulmonic disease, which are likely to be relieved by the residence at Madeira. The subject is too grave to admit of trifling, and we wish Dr. Heineker had clothed his observations in a more sedate and serious garb. He very truly, however, states, that physicians too often advise, and pulmonics undertake, a voyage to Madeira, under erroneous impressions, and unfavourable circumstances; he concludes,

That a person with the *slightest inclination* towards consumption, cannot seek a change of climate too early.

That a residence of a few winter months will avail but little.

That years, or at all events, winters, are necessary towards recovery or security.

That climate, unassisted by care and prudence, will be insufficient.

That a suppression of symptoms, for a time, is not to be trusted to—" *lateat scintilla.*"

That *incipient* is a frequent misnomer for *confirmed.*

That those in the more advanced stages of disease, are not to expect a *cure*, but only a *palliative*, and that, too, under the strictest precautions, and as long only as they breathe a bland and temperate air.

So many books have been published upon the climate, &c. of Madeira, that it is not necessary to refer to the very scanty remarks of Dr. H. upon this part of the subject.

For his concise statement of the prevailing diseases of Madeira, we must refer to the original paper, in the repository of July.

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12. *Sulphate of Quinine—Masked Intermittent.* We do not recollect seeing any case where this new remedy was taken, to any extent at least, by a medical man, and where, of course, the physiological effects of the medicine could be appreciated by personal feeling. The following concise statement may not, perhaps, be entirely unworthy of the reader's attention, on several accounts. We shall give it in the words of the patient himself, as noted in the intervals of his attacks, and we can vouch for the correctness of the statement.

"On Friday night (25th of June, 1824, I returned home late, the night being raw and damp. I had scarcely got into bed, when I was seized with a rigor, and a peculiar painful sensation in every muscle of the body. This state continued several hours, and was not succeeded by any reaction; but on the contrary, a chilliness accompanied by the muscular pain, remained through the night. Next day, (*Saturday 26th*) kept in bed—pulse 80—skin cool—tongue furred—the muscles of the eyeballs so painful, that I dared scarcely to look around. *Sunday 27th*—being much solicited, went out in the carriage, to see some patients, in a very uncomfortable state. The muscular soreness very great—no appetite at all—no thirst—no headach—nor any febrile symptom, except furred tongue, and some quickness of pulse. In the evening, a slight rigor, and such an increase of the muscular soreness, that I went to bed, and spent a wretched night, having horrible dreams, whenever I fell asleep. *Monday 28th*—a good deal better to-day, and sat up; but the muscular soreness continued, and my intellect was clouded. The dismal dreams, and half-waking phantoms, continued to distress me greatly now, and throughout the whole of this week, gradually increasing in intensity. Nothing but aperients and diaphoretics had hitherto been taken. *Tuesday 29th.* Got up a while in the forenoon, but was harassed with indescribable languor, dejection of mind, and irritability of temper. At four p. m. the rigor came on, and lasted about half an hour, succeeded by great heat of skin, pulse 110, thirst, and the most dreadful chaos of horrible images passing through my mind. In the evening bled to syncope, and leeches applied to the temples and forehead. Spent a wretched night, feeling cold, yet covered with warm perspiration. *Wednesday, 30th* Somewhat better—no rigor—no fever— but the same dreadful depression of spirits, languor, and terrific images, when I dozed, or even closed my eyes. *Thursday, July 1st.* All the forenoon, felt an anticipation of an attack, and an increased perturbation of mind. Was seen by several physicians, who agreed that there was nothing serious in the complaint, as my pulse was only 86, skin cool—tongue moist, though furred—and no pain or uneasiness, except in my muscles. *At three o'clock p. m.* the enemy made his approach with a severe rigor, of three quarters of an hour's duration, succeeded by the most tremendous reaction, which I had ever felt—or, I think, seen. The heat suddenly got up, and the pulse rose to 136, every artery vibrating with intensity. But it was the intellectual suffering which absorbed all my attention. Though broad awake, and perfectly sensible, a rapid succession of the most terrific images perpetually presented themselves to my mind, while the most perfect conviction obtained that my last day was come. I became thoroughly convinced, from the dreadful state of my intellectual system, that the brain and its membranes were inflamed, even to disorganization and effusion. In more than one of my dreadful waking dreams, I conceived that I was lying on my face, in a dissecting room, while two anatomists were opening my head and spine, and descanting on the mass of disease which the parts presented! The horrors of that evening can never be forgotten. The images now, and indeed all along, were invariably of a sepulchral hue—tombs, skeletons, putrid bodies, and fearful spectres, were ever the prominent figures of the agonizing drama which passed before me, or in which I thought myself engaged. This dreadful hot stage changed into a profuse perspiration, which lasted the greater part of the night, with very little mitigation of suffering, and only transient dozes of sleep, or rather of terrifying dreams. My pulse, even next morning, was 110, though the heat and perspiration had ceased. For two or three days past, I had been suspecting that my disorder was assuming the tertian type, and was now convinced of it. But as my pulse kept high this day, (2*d July*) my physicians wished to see whether the paroxysms should again return on Saturday, before they ventured on bark. Friday passed in the usual state of languor, depression of spirits, and sleeping and waking dreams of death and all his attributes. *Saturday, 3d July*. After a wretched night, I felt the usual precursor—an anticipation of the attack. As the clock struck two, the cold stage set in, and lasted three-quarters of an hour. Then came the reaction, similar to that of Thursday, but not accompanied with quite so much mental distress, or waking delirium, being now, as were all my medical friends, convinced that the disease was completely tertian. The hot and sweating stages, however, continued with great intensity, till midnight, when the perspiration began to abate. At this hour I commenced the sulphate of quinine, at first, in doses of two grains every four hours—but gradually increased, so that I took twenty grains before the period of accession, on Monday. No paroxysms, however, recurred that day, nor afterward—but seven grains more of the sulphate were taken in the next thirty-six hours. The debility now felt was excessive—and a few grains of calomel, which had been taken more than a week previously produced ptyalism that lasted ten days.

"I have, more than once, remarked the despondency, and the train of sepulchral images, that haunted my imagination, not only on the days of the attacks, but during the imperfect remissions which intervened. After the second dose of the sulphate of quinine, these changed into a character diametrically opposite. Every image that now floated before the mind, whether waking or sleeping, was of the joyous and pleasing cast, nor could I, when I tried from curiosity, conjure up a single sombre spectre, of all the countless multitudes that before occupied the whole of my mental view. This I consider to be a very curious phenomenon, and a very remarkable illustration of the connexion and dependence subsisting between conditions of body and operations of mind. The only other physiological effect of the quinine, which I shall notice, is its influence on the vascular system. For several days after the medicine had been discontinued, the pulse kept strong and full, at from 100 to 108, without the accompaniment of any one other attribute of fever. The skin was cool—the tongue moist—no thirst, with all this strong tone of the vascular system. It could not have been the effects of the mercury, for when the mercurial influence became far stronger, the pulse fell to 80, and remained there during convalescence. From this unequivocal power which the quinine possesses, of increasing the tone of the heart and arteries, without apparently disturbing the other functions or systems, I apprehend we shall find, in this preparation, a remedy for many states and conditions of the body, to which the common forms of bark must ever be inapplicable, in consequence of the bulk of the medicine, and the disturbance which it produces in the stomach and other digestive organs. The sulphate, even when taken in doses of three grains, never occasioned the slightest inconvenience to the stomach. On the contrary, I generally felt a pleasant warm sensation there, for an hour or two after taking the medicine. I hope these observations may prove useful, in leading to the exhibition of this powerful tonic, in diseases for which bark has not been given at all—or not with advantage."*

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13. *Belladonna employed as a Preventive of Scarlatina.* There is no kind of knowledge which confers more honour upon the medical art, than that by which we are enabled to prevent the occurrence of disease. Every attempt that is made to achieve so noble, so philanthropic an object, should be deliberately and philosophically examined. By many practitioners, in Germany, belladonna is supposed to possess the singular power of preventing scarlet fever. It had been observed by Dr. Hahnemann, that very small doses of this drug produced symptoms analogous to those of scarlatina, and he was led to the hope that it might prove an antidote to the disease. Upon this highly important subject, Professor Koreff has addressed a letter to M. Laennec; the opinion, he maintains, is supported by the observation of sixteen years.† "Observation clearly proves," he says, "that the belladonna, taken for some time, either in powder or in extract, produces, especially in infants, a redness of the skin, which is sometimes transient, at others more durable. Dryness of the mouth, with a sensation of heat in the throat, dilatation of the pupil, anxiety; occasionally swelling of the submaxillary glands: symptoms having a great resemblance to those which accompany the eruption of scarlatina.

"The effect of the belladonna has also this, in common with scarlatina, that neither of them produces the redness of the skin invariably, whilst the symptoms about the throat are always present. It was not till I had received the authority of the celebrated Soemmering, who informed me that he obtained the most satisfactory results with it, when the disease raged epidemically, that I determined to employ it.

"This malady, accompanied by the most unfavourable symptoms, and having entirely changed its usual character, was, at that time, producing ravages almost as fatal as the contagious typhus. I then, for the first time, had to protect from this dreadful contagion almost all those who took the belladonna with a little perseverance, and of these there were many thousands.

"Since that time, I never lost sight of the discovery, which becomes the more valuable as the scarlatina has increased during the last thirty years, both in violence and extent, in many countries, and I have always found the same effects in different climates, and in epidemics of opposite characters. Many other physicians have equally confirmed the preventive powers of this plant; and the German Journals are daily filled with proofs of a benefit, which, with respect to some countries, equals that of vaccination. In France, the capital and provinces of which appear less subject to these fatal epidemics, than Germany, Switzerland, &c. less attention has been given to this discovery, and it has been rejected—it must be said, too lightly, and without any sufficient examination, as may be seen in the article Belladonna, in the Dict. des Sc. Med. I only remember a single observation upon this important subject, by Dr. Meglin, who gives an account of a trial which he gave to this preservative, during an epidemic of scarlatina at Colmar, and which confirms all the assertions of the German physicians. The absence of present danger is, perhaps, the cause of this indifference towards a discovery which, important in itself, might also be fruitful in results applicable to other diseases. At present, however, I shall confine myself to an account of the results which have been ascertained by repeated observations, and by a great number of individuals placed in very different circumstances, without incurring the reproach of having proceeded in a manner not sufficiently rigorous. The powder mixed with sugar, or the extract carefully made from the juice of the recent plant, are employed after the following formulæ. Extract of belladonna, three grains, dissolved in an ounce of cinnamon water. Powder or root of belladonna, two grains mixed with ten drachms of white sugar, divided into sixty doses. From half a dose to a whole one is given to a child, from six months to two years old, four times a day. To children from three to six years old, from a dose to one and a half. To those from six to nine, two to two and a half. To those from ten to twelve, three to four and a half. Of the solution, a drop is given for every year of the child's age, once a day, and fasting. Observation has shown, that when the epidemic is very fatal, or the intercourse with the patients very frequent and intimate, it is prudent to increase the dose a little. It has not yet been possible to determine, in a satisfactory manner, the length of time which is necessary to eradicate, by this remedy, the susceptibility of the contagion. Every thing leads us to believe that, the remedy, if used during a time too short to ward off the contagion, moderates very much the malignity of the disease. We know, for certain, that the remedy does not permanently overcome the disposition to scarlatina; and it is necessary to resume its use on every recurrence of an epidemic. We have always observed that the most intimate communication with the sick does not produce the disease, provided the medicine has been employed eight or nine times previous to being exposed to the contagion, and continued up to the period of desquamation. A circumstance very important to nurses. It appears more certain, to begin with rather strong doses, in order to guard against the first impression of the contagion, and to diminish the quantity after a few days. No sensible effect has been observed to follow the continued use of this small quantity of belladonna. Up to the present time, neither season nor locality, nor any other circumstance has appeared to diminish the preservative effect of this plant."

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* I forgot to mention the quinine produced considerable torpor of the bowels, which required much aperient medicine.

† Sur l'Emploi de la Belladone contre la Contagion de la Scarlatine—Bulletin des Sciences Medicales, Avril, 1824.

To us, the above facts do not appear very extraordinary. We know that, with few exceptions, two diseases will not go on in the same body at the same time. What is the effect of medicine but a disease? If then, from the use of a particular remedy, local and constitutional symptoms were produced, similar to those of scarlatina, we should certainly have imagined, without being in possession of the above statement of the German practitioner, that during the continuance of those symptoms, scarlatina would be very unlikely to take place. There are many well-known analogous facts, which will immediately occur to the minds of our readers, and upon which we need not dwell, to prove the infrequency with which two different morbid actions proceed simultaneously in the same patient. In this country, it is true, scarlatina is generally a mild disease. We may, however, be visited with severe and fatal epidemics, which would render necessary a trial of the plan proposed above.

V.

MIDWIFERY.

1. *Ascites in Pregnancy.* Mr. Langstaff (Med. Chir. Trans. v. xii.) has related an interesting case of this kind which, in a practical point of view, must be considered valuable to accoucheurs.

A lady in her ninth pregnancy, and in the 39th year of her age, appeared unusually large, and felt uncomfortable and listless, at an early period of utero-gestation. At the period of quickening, the abdominal enlargement was very remarkable. In the beginning of the seventh month the abdominal pain and distension were so distressing as to demand local and general blood-letting, blistering, &c. The extremities became œdematous, and fluctuation was perceptible in the abdomen, but not in all parts alike, being more evident in the hypochondria, particularly the right. Calomel, digitalis, and squills were employed without effect, and the dropsical symptoms became so urgent as to threaten the life of the patient. In consultation Dr. Farre gave it as his opinion, that the induction of premature labour was preferable to paracentesis abdominis. Dr. Davis came to the same decision. Accordingly, on the 14th March, the liquor amnii was let off. It was small in quantity. On the following day, the dropsical symptoms were more distressing than ever, and there were no signs of approaching labour. Mr. Langstaff was therefore induced to perforate the peritoneum about two inches below the umbilicus, with a moderate sized trochar. When about ten pints of transparent fluid were drawn off, the stream was checked by the uterus coming against the canula. This was obliged to be withdrawn, and an elastic gum catheter introduced in lieu, by which fifteen pints more were abstracted. Eight hours after the operation, pain was complained of over the whole abdomen, with restlessness, hot skin, quick pulse. Twenty-four ounces of blood were drawn from the arm, and was remarkably inflamed—saline aperients—five grains of calomel with the same quantity of hyoscyamus, at bed time. 21st. Bowels freely relieved—the symptoms of pyrexia and irritation the same—pulse 100, full and hard—urine high-coloured—pain in the abdomen. Twenty leeches to the abdomen, and much discharge of blood. 22d. Pain and tenderness continue, although the bowels are free, and the urine increased in quantity. Pulse 110, fuller and harder—tongue very white and dry. Thirty ounces of blood from the arm, more inflamed than ever. Saline medicines, with digitalis and 15 drops of *liq. opii sedat.* at bed time. 23d. All the symptoms ameliorated. Towards evening of this day, uterine pains came on, and the lady was delivered of a dead fœtus about four hours after the commencement of labour. The child did not appear to have advanced beyond the seventh month, and, from the appearances which it presented, must have been dead for several days. From this time every thing went on well, and no re-accumulation of water in the abdomen took place.

Mr. Langstaff, during the treatment of this case, was not able to obtain any satisfactory advice from men or books respecting the propriety of tapping. Denman decidedly sets his face against this measure. But the urgency of the case under Mr. Langstaff fairly authorized the operator, for death must have very soon taken place, had the water not been drawn off.

Professor Scarpa too, has published a memoir on this subject, and related a case successfully treated by paracentesis abdominis. The patient was 30 years of age, in her fifth pregnancy. Previously to utero-gestation she complained of constant obstuse pain in the whole circumference of the abdomen, and still more distressing pain in the loins, for which she had been bled by her surgeon to an exorbitant extent. The abdomen increased in size with extraordinary rapidity, so that in the fifth month of utero-gestation, the patient appeared as if at the end of her pregnancy. Diuretics proved ineffectual. At the beginning of the sixth month the tumefaction of the inferior extremities, and the distention of the abdomen caused excessive dyspnœa, with frequent faintings, inability to lie down, want of appetite, loss of rest—in short, she was driven to the point of death.

In this state, Scarpa visited her, and found the abdominal integuments livid and extenuated—the umbilicus prominent—the hypogastric regions tumid and greatly elevated—the inferior extremities swollen and threatening to burst—fluctuation evident in some parts of the abdomen, though obscure in others. The imminent danger of suffocation determined Scarpa to perform paracentesis abdominis. The trochar was introduced between the edge of the rectus muscle and that of the false ribs, on the left side, when a limpid and inodorous fluid escaped, in a continued stream, to the amount of nearly 30 pints. The respiration became more free, and the patient's feelings were relieved. She fell into a sleep of three hours duration. In the course of the following night, labour pains came on – the membranes broke—and it was computed by the attendants that 15 pints of liquor amnii came away! Two fœtuses were expelled, and died in a few seconds. On the 14th day, the patient rose from bed, and resumed her domestic employments. She afterward enjoyed excellent health.

In addition to the authority of Scarpa, Mr. Langstaff might have found another sanction for the operation he performed, in the erudite article "Grossesse," vol. 19 of the Dict. des Sciences Medicales, written by M. Marc. We shall quote a short passage from it. "*Cependant, si l'hydropisie qui complique la grossesse est assez considerable pour menacer la femme de suffocation, on ne doit pas différer de pratiquer la paracentèse.*" P. 459.

There is a passage in Scarpa's Memoir which arrested our attention, and we shall here extract it, as translated in the first volume of the Journal of Foreign Medicine, page 254.

"As for *acute* ascites, it is undoubted that the artificial and complete evacuation of the fluid contributes powerfully to re-establish the equilibrium between the exhalent and absorbent systems of the abdomen, as well as to excite the action of the secreting urinary organs. I have had frequent occasion to confirm the truth of this important point of practice in cases of *acute* ascites in children, after measles, and in puerperal women, in consequence of peritonitis."

A remarkable confirmation of the above came under our notice about eighteen months ago. A man of intemperate habits and addicted to opium as well as inebriety, became affected with chronic hepatitis, as evinced by fulness and tenderness in the right hypochondrium, clay-coloured stools, scanty and lateritious urine, yellowness and sallowness of the countenance, &c. These symptoms could not be removed by the usual alteratives and common modes of treatment. There now supervened pain and tenderness over the whole abdomen, with fever, white tongue, thirst, and extreme paucity of urine. Leeches, general bleeding, aperients, diuretics, all failed, and dropsical effusion took place to a great extent, accompanied by the most distressing pains over the whole peritoneum, so that the patient could get no sleep or rest by day or by night. Under these circumstances we directed him to be tapped in the linea alba, and about 20 pints of straw-coloured fluid were discharged. He immediately fell into a profound sleep, which lasted many hours. Diuretics and alteratives, which had no effect previously now produced a copious discharge of urine, and from that time till this—more than twelve months—no return of dropsy has taken place. It is a curious circumstance, however, that the cellular and adipose membrane of the lower extremities, which formerly had been œdematous, is now of extreme hardness, so as to feel like so much dense and solid wood. His limbs are considerably larger in circumference than naturally, but he appears to suffer no inconvenience from this state. The integuments of the abdomen are also becoming indurated. He takes opium three times a day—about two grains each time.

P.S. We shall lay before our readers, farther on, some additional information on the subject of this paper, which reached us too late for this article.

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2. *Cæsarean Operation successful.* M. Bosh, Surgeon to the Public Hospital of Maestricht, has recently performed this terrible operation with success. Both women were young, or in the prime of life. The pelves of both were, of course, distorted. The operations were per-

formed in the public hospital. The incisions were in the *linea alba*, and the lives of mothers and children were preserved.—*N. BibliothequeMed.*

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3. *Nervous Pregnancy.* Some of our readers, not deeply versed in obstetric literature, may start at seeing the title of this short article. But many of the most celebrated accoucheurs have witnessed or written on this species of pregnancy. Baudelocque says he saw more than twenty cases of it, some of which continued for several years. M. Gerard, of Lyons, has published a memoir on this subject; but the present case, related by M. Russel of Vars, in the first number of the GAZETTE DE SANTE, for the present year, is perhaps the most remarkable on record.

Case. Mary Gibaud, residing at Vars, department of the Charente, had enjoyed good health previous to her marriage. Shortly after this epoch, she became apparently pregnant. The menses ceased—nausea and morning vomitings occurred. The abdomen enlarged—the motions of the fœtus were felt or supposed to be felt—in short, every symptom of pregnancy was present. At the end of nine months labour pains commenced, and went on increasing for 36 hours. The midwife, unable to make out the case, called in a surgeon of great reputation. At the moment of his arrival, the patient had just fainted from a considerable uterine hæmorrhage, and the surgeon quickly proceeded to deliver. He was not a little surprised to find the uterus in an unimpregnated state. On recovering from syncope the labour pains had gone, but in two or three hours they returned as violent as ever. The surgeon now bled her copiously from the arm, and all the unpleasant symptoms vanished. During a month she continued well—the abdomen still large. At the end of this period, the nausea and vomitings again commenced, and the usual symptoms of pregnancy went on for nine months, when the (apparent) labour pains again recurred—and again ceased after a natural and artificial loss of blood similar to that stated above. Then a month's interval—and then again symptoms of pregnancy, and so on. This state continued for three or four years, when the case getting abroad, the patient was visited by several Professors of different Universities. In the fourth year she was carried to the Hospital of Angouleme, where the physicians considered the case as dropsy, and paracentesis abdominis was performed, but without evacuating any fluid. She recovered as usual, and went on for twenty years, with all the symptoms of pregnancy, and every nine months a kind of attempt at parturition, to be relieved only by uterine hæmorrhage and a copious bleeding.

For the last five or six years the patient had every month been subject to an abscess in the left ear, from which a sanguineous pus was discharged. During the whole of the twenty years, her breasts were gorged with milk. She died in the 51st year of her age, in consequence of inflammation spreading from the ear to the brain. M. Russel and another medical gentleman examined the abdomen, where they found every organ in a state of integrity, but a considerable quantity of fat in the omentum.

Attested as the above case is, and knowing as we do, what strange vagaries Nature plays sometimes among the female race, we dare not deny the facts as here stated. But why it should be called "NERVOUS PREGNANCY" is not so clear to us. If we were called upon to give the phenomenon a name, we should apply the term *sanguineous* rather than nervous. The case is altogether curious, and may not be uninteresting to the accoucheur and the physiologist.

4. *Sudden Delivery.* Several cases of this kind have lately excited the attention of medico-legal writers, in this country, and of which we took notice in our last Periscope. A remarkable instance, of a similar nature, recently occurred at Arras, in France. A woman, twenty-two years of age, and in the last month of pregnancy, was taken with some pain in the bowels, and thinking she was going to have a stool, repaired to the "*garde-robe.*" It was in the night. She had scarcely sat down, when her infant was born, without any pain, or the least notice, and fell into the privy below! She knew nothing of what had happened, till she heard the cries of the child. The alarm was given; but it was three hours before the infant could be liberated from its dreadful abode! It was apparently lifeless, and though, by the usual means, respiration was restored for a few minutes, yet life could not be preserved.

5. *The Turn of Life.* The cessation of the catamenial evacuation is always regarded with a degree of dread by the female race—especially if they happen to be affected, for some years previously, with any chronic complaint. But, even if their health be ever so good, they have a secret apprehension of the critical period—an apprehension which has, in all ages, been fostered by medical authority and observation. In these days of scrutiny and scepticism, the "turn of life" has been made the subject of inquiry, by M. de Chateauneuf, and the result is not in favour of the popular opinion—or, as it will now be called, *prejudice.* This author grounds his memoir on tables of mortality, furnished by the most respectable authorities, from which he draws the following conclusions. Between the 43d and 60th degrees of North latitude, and over a space extending from Marseilles to St. Petersburgh, the most accurate and authentic tables of records show no other increase of mortality in females, from the age of thirty to seventy, than what necessarily results from the progress or decline of life. "*On n'aperçoit d'autre accroissement dans leur mortalité que celui necessairement voulu par les progrès de l'age.*"

At all periods within the above range, there is, in fact, according to the said tables, a greater mortality among men than women—especially between the age of forty and fifty years—hence the "turn of life," or we will say, the 45th year, is a more critical period for the lords of the creation than for the ladies. "Il resulte de ces observations que l'age de quarante à cinquante ans est veritablement plus critique pour les hommes que pour les femmes."

On these calculations and tables, we can only remark that, although they appear to prove that the general ratio of mortality among women is not increased by the turn of life, yet they do not prove that the cessation of the catamenia is unproductive of danger, and, in many instances, of death. It ought to be recollected, that the "turn of life" brings with it an immunity from some dangers, as child-bearing, for instance, and therefore, although the *general rate* of mortality may not be influenced by this epoch, the *kind of death* may vary. If, for example, as many women die, after the age of forty, in consequence of the "turn of life," as there died before that age, of child-bearing, the ratio of mortality would not be altered, and yet it would be quite certain that the critical period was a period of danger.

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6. *Laceration of the Perineum.* Mr. Churchill was in attendance on a poor woman, in the neighbourhood of Soho, in labour of her first child. After five hours had elapsed, he found the soft parts so indisposed to dilate, that he was obliged to offer resistance to the descent of the head, for two hours afterward, fearing that the strong efforts made would rupture the perineum—"an accident that, in spite of all my endeavours to prevent, took place; for, while the woman was most uncomfortably situated, on a bed so low as to require me to kneel, to afford proper assistance, a severe pain came on, that induced her to move completely out of my reach, and before I could adjust my situation, the head of the child found its way through, being, after the usual time, followed by the body and placenta."

The perineum was torn, but the sphincter ani escaped.

We conceive that resistance, being once offered to the descent of the head, so much the greater danger is there, if this resistance be withdrawn, whether by accident or design, before complete dilatation. In the present case, it was accident, and rupture was the consequence. Mr. C. observes that—"laceration of the perineum is much more frequently the result of impatience, or of improper interference, than an accident not to be controlled." The question might here be put, would not the patient have had as good a chance, if no interference had been offered from the beginning?—We do not presume to answer this question, but only propose it to our readers.

We would advise Mr. Churchill, or any of our junior brethren, upon similar occasions to the above, to abstract blood from the arm, which we have always found to accelerate the relaxation of the parts through which the head of the fœtus has to pass.

Mr. C. very properly exhibited a powerful anodyne draught—bound the thighs together, and let the patient alone till next day. On examining the parts, he found the laceration had extended to the sphincter ani, and then branched off on each side of it, leaving a complete semicircle of that muscle unconnected with the surrounding parts. Happily the recto-vaginal septum was left entire. Mr. Churchill passed two sutures, to give the parts an opportunity of approximating and uniting. Fortunately the union was effected, and the patient is now well.

Dr. Haighton, in his lectures, drew a frightful picture of this accident, and observed, that it should never happen in the presence of a medical man. Doubtless, when the rectum and vagina are laid into one, it is a most deplorable event; but mere laceration of the fourchette, we do not consider in so very serious a light. Notwithstanding the dogma of the late Dr. Haighton, we are convinced that the fourchette may be torn in the presence of a medical man, without any neglect on his side. The total laceration into the rectum, we think, might always be prevented by proper resistance to the violent and rapid propulsion of the fœtus, on the part of the accoucher.—*Med. Repos. No.* 6.

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7. *Rare Case of complicated Labour.* Mr. Allan [Med. Chir. Trans. Vol. XII.] has related a curious case of complicated labour, from Locking of the heads of twins. The woman was thirty years of age, and this was her third labour, in which she had been eight hours, when Mr. Allan was summoned. The presenting limb was the left knee, and with it the vertex. He attempted to push up the knee, but without success. The child's ham was then hooked with the fore finger, when the knee was pulled down, and the child's head was felt to ascend. The body was delivered, but the evolution of the head was prevented in consequence of the hollow of the sacrum being occupied by the head of another child, whose body was still above the brim of the pelvis. The face of the second child was turned toward the sacrum, and its occiput closely applied to the throat of the first child. The back of the neck of the latter, was closely applied to the symphysis pubis of the mother, and its face to the back of the neck of the child whose body remained within the uterus. Under these awkward circumstances, it was found impossible to push up the head next the sacrum, without carrying the other before it—and every attempt to extract that which was next to the pubes had the effect of pressing the other so forcibly downward, as to threaten a rupture of the perineum. Mr. Allan was a little embarrassed, but soon made up his mind as to what he should do. Before he could put his intention into execution, however, a violent parturient effort expelled both heads at the same time. Both children were dead. The mother had a smart attack of hysteritis, requiring the abstraction of seventy-six ounces of blood, and other means for its reduction.

The mode of proceeding which Mr. Allan intended to pursue, had nature not expelled the twins, was to detach the body extruded, from the head within; and then push up the latter out of the way, delivering the child whose head presented by the forceps. The detached head must afterward have been delivered with the forceps, or in whatever way the operator found most convenient. As an addition to this plan, we would suggest that, before pushing up the detached head, a piece of garter or tape should be passed through the lower jaw, or, in some manner, be secured to the trunkless head, in order to extract it afterward, and thus save the second introduction of the forceps, or other instrument.

8. *Spontaneous Rupture of the Uterus, in the Fourth Month of Utero-gestation.* There are few, perhaps no well authenticated instances on record, of *spontaneous* rupture of the uterus at so early a period as that above mentioned. The following case, however, is authenticated beyond all possible doubt. It was read at the "SOCIETE DE MEDECINE DE PARIS," by Dr. Duparque, and since published in several Journals. We take our account from the GAZETTE DE SANTE of March last.

A married woman thirty-three years of age, had enjoyed good health, and borne several children. In her second pregnancy, she experienced a fall, which produced abortion, and, from that period, she was affected with menorrhagia—except when pregnant, at which periods, the menorrhagia disappeared.

In the fourth month of her fifth pregnancy, being in good health, and rather embonpoint, she gave way to a most violent paroxysm of rage (to which, indeed, she was very prone) on the subsidence of which, she complained of an acute pain in the abdomen, with a feeling as if something had snapped. She passed the night, however, in tranquillity, and next day attended to her domestic concerns. The second night was also passed quietly, but, on the third morning, she perceived some spots of blood on her linen. She walked a considerable distance this day, to consult a midwife, who advised her to go home, and keep quiet. On returning home, at half-past twelve, she ate with a good appetite. At four, p. m. while using some exertion, she was suddenly seized with violent pains in the abdomen, which continued, and were exasperated when she took any thing to drink. The stomach rejected every thing that was swallowed. She had a little rest in the course of this night. On the fourth morning, at six o'clock, she suddenly turned pale, became oppressed, and after hiccuping twice or thrice, expired, perfectly sensible to the last moment.

Dissection, Seven Hours after Death. The abdomen was tense, but not sonorous. When opened, there flowed out a quantity of black and partially coagulated blood, with which the lower half of the abdominal cavity was filled—being about four pounds in all. In the abdominal cavity was also found a male fœtus, of about four months. Following the umbilical cord, it was traced into a rent in the superior and posterior part of the uterus, of about two inches in extent, around which rent the parietes of the uterus were thinner than in any other portion of that organ, and there were here a congeries of dilated vessels that gave the part a dark colour, as compared with the surrounding structure. A portion of placenta, the size of a pullet's egg, projected through the rent, the remainder of it being within the uterus, adherent to its internal surface, except at the part where the parietes of the organ were thin, as above mentioned. There was no other morbid appearance—no trace of peritoneal inflammation.

Dr. Miquel, editor of the Gazette, and who is an accoucheur himself, has hazarded some reflections on the above case. He thinks, and probably with justice, that the thinning of the uterine parietes, and the varicose state of the vessels around the rent, showed lesion of old standing—probably to be traced to the fall, which produced abortion, some years previously. Was it to this cause, he asks, that we are to attribute the habitual menorrhagia, to which she was subject, except during the periods of utero-gestation? To the next conjecture which Dr. M. hazards, we cannot give our entire assent—namely, that the rupture of the uterus took place during the paroxysm of rage, on the first day of the narrative, but that the rent was plugged up by a portion of fœtus or placenta, for a space of thirty-six hours, thus preventing hæmorrhage, and permitting the woman to follow her domestic occupations, without inconvenience. To us this does not appear probable. We think there would have been a *Continuance* of pain during life, and that there would have been traces of peritoneal inflammation after a solution of continuity of thirty-six hours duration, discoverable on dissection. We are of opinion, that the rupture of the uterus took place at four in the afternoon, fourteen hours before her death. We find that, at that hour, she was suddenly seized with violent pain, which continued, accompanied by other alarming symptoms, and soon terminated in death.

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9. *Melange de Chirurgie Etrangere, par une Societé de Chirurgiens de Geneve.* Vol. I. pp. 476. Geneve, 1824.

ART. I. *Sur la Grossesse accompagnée d'Ascite.* Par le Chevalier ANTOINE SCARPA, &c. A society of surgeons at Geneva, among whom are the two Maunoirs, Mayor, Peschier, Morin, Dupin, and Olivet, have undertaken to collect, and translate into the French language, the most interesting surgical memoirs, published in the various countries and tongues surrounding Switzerland. The first volume of this enterprise is now before us. A considerable portion of it is occupied with Memoirs which have appeared in this country, and more especially in the Medico-chirurgical Transactions of London. Of these it will be our hint to speak, in this place, as we give ample analyses of them, as they appear. Of the foreign papers, of any interest, contained in the Geneva Melange, we shall endeavour to lay a full account before our readers, beginning with the venerable chirurgical patriarch of Pavia, whose memoir stands first on the list, in the volume before us.

PREGNANCY COMPLICATED WITH ASCITES.

Those who have read Mr. Langstaff's interesting case of this kind, published in the last volume of the Medico-chirurgical Transactions, must feel with him, how desirable it is to have as much information as possible collected on this obscure point of obstetric surgery. An account of Scarpa's memoir is contained in the first volume of the quarterly Journal of Foreign Medicine; but, in the present memoir, there are cases and observations added, that are of more importance than the original—and it is on these we shall principally dwell.

A collection of water in the uterus, or in the cavity of the abdomen, during pregnancy, becomes a very serious accident, in consequence of the swelling of the lower extremities, distention of the abdomen, displacement backwards of the abdominal viscera, embarrassment of the diaphragm, constriction in the thorax, and consequently oppression of the organs of respiration. When the water is in the cavity of the uterus, the case is not near so formidable as when the collection is in the cavity of the peritoneum.

Case 1. This case, related by Scarpa in his memoir, and translated into the first volume of the Journal of Foreign Medicine, will be found at page 492 of our present Number, along with Mr. Langstaff's case. We shall therefore only refer to it and pass on to the new matter now brought forward.

Case 2. By Dr. Cruch, Hospital Surgeon of Pavia. Dr. C. observes, that the success attending Scarpa's operation is hardly sufficient to authorize us to puncture the abdomen in the place pointed out by that venerable surgeon, until we have more facts collected on this point. The following case is therefore deserving of attention.

Mary Gregnani, ætat. 29, was received into the Hospital of Pavia, on the 30th April 1820, being then about five months gone with child, and evidently labouring, at the same time, under ascites. She had had a protracted intermittent fever previously, which gave way to the use of the bark, soon after which the ascites appeared, and increased so much as to greatly incommode her breathing. She could now rest better lying on her face than in any other position. Diuretics, drastric purges, and venesection were tried, but without affording any relief. By the latter end of August the accumulation of water threatened suffocation, and as the patient appeared to be in a condition similar to that of Scarpa's, our author determined on paracentesis abdominis, in the left hypochondriac region, as Scarpa had directed. The operation was performed on the 7th September, in the presence of M. Panizze, Professor of Anatomy. Twenty-five pints of water were drawn off, having a slight greenish tinge. Great relief was immediately felt by the patient. Although the quantity of water left in the abdomen was very trifling, yet it very quickly re-accumulated, and in 24 hours the abdomen was again considerably distended. In the night of the 9th the wound opened, and a good deal of water escaped spontaneously. In the night of the 10th labour came on, and Gregnani was delivered of a living child. The labour pains then ceased, and the placenta was not expelled. Flooding succeeded, and went on to a great extent before any attempt was made to extract the after-birth. When the attempt was made, it failed, in consequence of a partial adhesion of the placenta to the uterus, which the surgeon was afraid to separate, lest he should injure the uterus! The poor woman died of internal hæmorrhage in the mean time.

Dissection. Eight pints of water in the peritoneal cavity—no appearance of phlogosis in the peritoneum or other part of the abdomen. The uterus was as large as in the sixth month of pregnancy. On its internal surface the placenta adhered for the space of about three inches.

In attempting to separate this adhesion, it is said that lacerations of the internal parietes of the uterus took place.

On this case we beg to offer a very few remarks. We think the operation was performed too late—not that the patient's death was occasioned by it, but an earlier evacuation of the water would have prevented a great deal of suffering. In the second place, we cannot but condemn the inertness of the practice, in suffering a woman to die of uterine hæmorrhage, while the placenta remained in the womb. As to the lacerations which took place (or are said to have taken place) during *post mortem* separation of the placenta, we regard them as no argument against the propriety of separation *during life*. Many parts of the body will give way to a slight force, after vitality has ceased, which would have manifested great power previous to that event. In short, the woman could only have died, whatever happened during the extraction, and without this process there was little chance of arresting the hæmorrhage.

M. Peschier, who is the translator of the memoir, remarks, that he has very frequently checked uterine hæmorrhage, by exhibiting the extract of rhatany, in doses of one drachm every hour. We are not aware that this medicine has ever been exhibited in such cases in this country.

Case 3. (By the same author.) M. L. Mandilini, 31 years of age, of plethoric habit, had, like the preceding patient, been long harrassed with intermittent fever, accompanied by distressing irritability of the stomach, and followed ultimately by icterus and enlargement of the liver. From these, however, she was recovered pretty well. She became pregnant, and was delivered of a dead child. In October, 1819, she was attacked with discharge of blood from the uterus, which was repressed by cold applications and astringents. In November of the same year she was threatened with hæmoptysis, which was averted by bleeding, digitalis, and nitre. In June 1820, Mandilini became pregnant a second time, the utero-gestation going on regularly till the sixth month, except that the patient could not lie on the left side. Towards the end of October she complained of frequent pains in the lower belly with desire to make water, cough, and difficulty of breathing. The abdomen was now observed to be much larger, than in ordinary states of pregnancy, six months advanced, and, in fact, ascites was clearly ascertained to exist, though to no great extent. *2d November*. The abdomen was now excessively distended and almost livid—the breathing very difficult—the lower extremities greatly swelled. Paracentesis (in the same place as before) was performed, and 30 pints of limpid and inodorous water were drawn off, with great relief to the patient. Still the uterus appeared much larger than natural at such a period of pregnancy. Two hours after the operation, slight uterine pains came on, during the continuance of which, about six pints of watery fluid came away *per vaginam*. After this, blood was discharged, partly coagulated, partly fluid, followed by much faintness, from which, however, she soon recovered. On the 9th November real labour pains set in—the membranes presented themselves in a bag—and in four hours two still-born children were expelled, in size corresponding with six months utero-gestation. The afterbirth followed, without any assistance. From this time the patient recovered well, and had no return of the dropsy.

It will have been observed that in all the three cases related, parturition very quickly followed the operation.

Case 4. (By Charles Maunoir.) Madam V———, pregnant four months and a half, applied to our author on the 11th January, 1819, complaining of acute pains in her stomach—inexpressible anguish in the chest, augmented by the slightest mental agitation—tightness in breathing. The pulse was small—the abdomen larger than it ought to be at that period of pregnancy—face pale—eyelids swelled. Diuretics—fomentations to the abdomen. 18th January. Swellings about the spine, chest, and parts of generation—dyspnœa very troublesome—pulse small and hard—urine scanty and high-coloured. Venesection. The breathing became freer after bleeding—yet the swelling gained ground—especially about the groins and labia pudendi. Scarifications gave vent to much discharge, and produced great relief. 27th. When visited, the patient expressed great anxiety, but no actual pain to announce an approaching labour. In the course of three hours, however, labour pains set in, and the accouchment was speedily over. The fœtus was in a state of putrefaction—the placenta followed. There was no discharge, either of blood or water. The abdomen was still dropsical, and the fluctuation evident. Diuretics and purgatives were administered. On the 3d day, a diarrhœa supervened—and the urine began to flow in abundance. The anasarca diminished. In twelve days after the accouchment, no fluctuation was perceptible in the abdomen. Afterward tonics were administered, and the patient got quite well.

Case 5. (By the same author.) It is rare, he observes, to find pregnancy take place in a person who has frequently undergone and is still undergoing paracentesis abdominis. Here follows a case of that kind.

On the 20th April, 1804, our author was called to perform the operation of paracentesis on a woman residing in the country. She informed him she was pregnant, as she had not menstruated for some time. On examination, however, Mr. Maunoir came to the conclusion that she was *not* pregnant. Fluctuation was very evident in the abdomen; and engorgement of the liver was suspected. Paracentesis was performed on the left side, and 25 pints of water were drawn off, limpid but viscous. Diuretics were ordered, and the woman was soon about her domestic concerns. The abdominal effusion, however, returned, accompanied by inclination to vomit—frequent desire to urine, but the discharge scanty, in proportion to what she drank. In two months the abdomen was so enlarged that it was necessary to tap her again, when nearly the same quantity was drawn off. She still insisted that she was pregnant, but examination belied the idea. In a month, the operation again performed. At this time our author lost sight of the patient, and did not see her till the beginning of January 1805. A surgeon in the neighbourhood had attempted to draw off the water from the abdomen several times in the interval, but had only succeeded once. At this period the woman was found to be actually pregnant, having become so about the middle or end of October 1804. She was now much emaciated, but had no vomitings. Paracentesis for the 5th time (not counting the unsuccessful attempts) and milk diet recommended, with diuretics of digitalis and cream of tartar. But the accumulation of water was very quick, and she was obliged to be tapped, often at intervals of three weeks. On the 27th June, after a quantity of water had been drawn off, a tumour above the pubis was very perceptible. On the 15th July, she was delivered of a living child, the abdomen still preserving a great size. A diarrhœa, which could not be restrained, now came on, and reduced the patient to the lowest ebb. At this time, an erysipelatous inflammation appeared on the parietes of the abdomen, and threatened gangrene, but death put an end to her sufferings eight days after parturition. On dissection there was ovarian dropsy as well as ascites and anasarca.

VI.

Legal Medicine.

1. *Wounds by Fire Arms.* (*Medico-Legal.*) The following curious fact is not undeserving of attention by the Medico-legal Inquirer. An old man was fired at from a deep ditch on the road side, during a thick fog, and killed on the spot. A near relation, who was successor to his property, and whose menaces and conduct for some time previous, were of an alarming nature, was suspected of the murder, and arrested. It was proved that, a few minutes before the murder was committed, the accused was seen very close to the fatal spot, with a fowling piece in his hand. At each successive examination, the accumulation of moral evidence increased, so that no doubt was left on the minds of the jury, although there was no direct ocular witness of the murder. But the scene changed, when the *procès-verbal* of the dissection was read in court. It was proved by the surgeons, that the death had been occasioned by two balls, one of which cut the aorta across, and the other passed through the ilium. The hole in the ilium was perfectly circular, and when accurately measured, was found to be eight lines in diameter. The calibre of the prisoner's fowling-piece (the only arms in his possession) was found to be only six and a half lines in diameter. This circumstance at once set the prisoner at liberty. It was supposed that the assassin must have fired from a military musket, and escaped in the fog.

Some time after this, an old officer of the Gendarmerie committed suicide by means of a cavalry pistol. The ball perforated the parietal bone, traversed the brain, &c. The hole where it entered was perfectly circular, and, when accurately measured, was found not only to greatly exceed the calibre of the pistol, but, in fact, to admit, without much force, the barrel of the pistol itself.

The bearing of this case upon the preceding will be sufficiently manifest. We greatly fear that the moral or circumstantial evidence was right, and the physical or medico-legal evidence wrong—and if so, that science saved a murderer from the gallows. But this was better than that an innocent man should suffer. We think the Jury were right in acquitting the prisoner in the case above mentioned; because, in the great majority of cases, it will be found that, when a bullet has passed through a solid substance—wood for example, the hole will be smaller than the bullet. In passing through a very hard and inelastic substance, however, we can easily conceive that the diameter of the perforation may sometimes exceed that of the perforating body, in consequence of the destruction of parts extending somewhat beyond the immediate sphere of the destructive projectile. The case we have detailed is worthy of a place in the medico-legal student's memory.—Gazette de Santé, *Janvier*, 1824.

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2. *Poisoning by Cicuta.* Four children ate of *cicuta virosa* that grew by the side of a rivulet. Of these, three died in convulsions—the fourth was saved by an emetic promptly administered. The following were some of the principal appearances noted on dissection:—a number of bluish red spots on the skin—the pupils dilated—the vessels of the conjunctiva gorged. In the chest, the lungs, though otherwise sound, were of a bluish red colour—gorged with blood—as were the vessels of the pleura—the heart was not flaccid, and the right chambers contained much blood. In the abdomen, the stomach and intestinal canal were distended with gas. On the internal surface of the stomach the mucous membrane was found covered with brownish spots, beneath which there was an appearance of gangrene. The same were observed in the small intestines. Nothing unusual on the external surfaces of these parts. The epiglottis and pharynx were red, and much mucus in the trachea. The vessels of the brain were highly injected, as if the little patient had died of apoplexy.—*Journal Complement. Fevrier*, 1824.

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3. *Apothecaries' Act.* It would almost appear that this act is principally calculated to annoy those for whose benefit it was designed!—The following recent trial will exemplify this remark. Mr. Malmsey, who had regularly passed Apothecaries' Hall, brought an action against Mr. Abbott for medicines and medical attendance furnished to defendant's son. A verdict was found for the plaintiff at Shrewsbury. But a counter-action was set up, and a motion made for rule to show cause why the verdict should not be set aside, and a nonsuit entered upon. It was shown that, according to the act, no certificate is valid unless signed by a majority of the Court of Examiners, of whom eight form a quorum. The plaintiff, at the trial, produced a certificate signed by four persons, purporting to be Examiners, and countersigned in the

margin by a person calling himself Secretary to the Board. *But no proof was given that these names* (with the exception of Mr. Johnson and Mr. Wheeler) were members of the Court—and Mr. Wheeler's handwriting alone was verified. Here then arose the objection—for the Act required that the instrument *should be proved to be signed by a majority of the Court.* The signature of the Secretary was of no avail, because the statute did not recognise such an officer. His name therefore could not authenticate a document of which the necessary legal proof was, first, that—*the handwriting of the subscribers should be verified*—and secondly, that—*it should be shown they formed a majority of the Court of Examiners.* Although it appeared to Mr. Justice Bayley, that the counter-signature of the Secretary *ought to be taken as good evidence of the signatures of the members,* yet the law was imperious, and the Court had no course left but to administer the law as they found it. The rule *nisi* was therefore granted.

Till some alteration be made in the Act, therefore, it is necessary for every apothecary who has passed the Hall, and who sues for five pounds reward for medicines and attendance, to bring persons into court who can prove the signature of the Court of Examiners! To use the words of an acute medico-legal cotemporary writer, (Dr. Gordon Smith) it appears that the only apothecaries, *de jure,* are those who, *having no certificate,* can prove that they were practising as such *on* Tuesday, August the 1st, 1815!—so much for the glorious uncertainty of the law!

We will add one word of advice to our junior brethren—and that is—never to bring an action against a patient for recovery of debts. Medical remuneration should not be put on the same footing with remuneration for *work done,* or ponderable substances served out over a counter—nor should the same measures be resorted to where remuneration is withheld. The character of a litigious doctor is not less degrading or injurious than that of an avaricious one. We had rather live on bread and water than wring from the gripe of the sordid miser, or ungenerous wretch, the paltry sum which a court might award, but which a medical man should despise. And, laying aside all views and feelings of a philosophic nature—shaping our course by the Koran of the counting-house—we are convinced that it is sound *pecuniary* policy in a medical man to avoid, *coute qui coute,* an appeal to the law for professional remuneration.

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4. *Poisoning by Prussic Acid.* As the inspection of bodies destroyed by this subtle poison has not yet furnished unequivocal data whereon to ground a medico-legal evidence on the subject, M. Mertzdorp thinks he can contribute to the present stock of our knowledge, by the results of two dissections of suicides in which he was judicially concerned—one in the year 1819—the other in 1821.

Case 1. A hypochondriac, aged 44 years, swallowed, at eight o'clock in the morning, two drachms of the ethereal oil of bitter almonds—threw himself back on his bed, and called to his housekeeper, who was in the next room, and who on entering his chamber, saw his eyes roll upwards—his face spasmodically affected—and his chest heaving laboriously. In twenty minutes, a physician arrived, who found the patient insensible—his eyes open and fixed—the pupils immoveable—the breathing stertorous, and becoming slower every moment—the pulse scarcely perceptible. In ten minutes more the patient expired, his body emitting a strong odour of bitter almonds. This was the 9th of February, 1819. *Dissection* was performed 29 hours after death, and even then the putrefactive process had far advanced, and the body was covered with numerous greenish blue spots. Nearly pure blood issued from mouth and nose whenever the body was moved; both this and the whole body, exterior and interior, exhaled, notwithstanding the putrefaction, a strong effluvium of prussic acid. The jaws was firmly locked. On opening the abdomen, the stomach and intestines were found distended with gas, and very red. The cardiac and pyloric orifices were redder than the other portions of the stomach externally. In the stomach itself were found about six ounces of a brownish fluid, smelling strongly of bitter almonds. The mucous membrane of this organ was very red, and marked with stripes of a sanguineous appearance. The small intestines presented nearly the same appearance. The hydrocyanic odour was perceptible throughout the tube, but more strongly so as it approached the stomach. The liver was livid and very voluminous, from which a violet-coloured liquid blood flowed. The same was observable in the spleen. The blood in the kidneys was similar to that in the liver and spleen. Nothing else remarkable in the abdomen. In the thorax the lungs were found flaccid, containing little blood, but swimming in a sanguinolent fluid which filled the cavity of the pleura. The heart was also flaccid, with gas and a little blood in its cavities. Nothing else remarkable in this portion of the body. In the head the vessels were found filled with the same kind of blood as in the rest of the body, except that it had less of the odour of bitter almonds. There was a serous effusion under the arachnoid. The cerebral substance was short.

Case 2. A young man, about 20 years of age, (un pharmacien) swallowed, as nearly as could be guessed, about three drachms and a half of Ittner's prussic acid. He was found dead in his bed, but the interval between swallowing the poison and dissolution could not be ascertained. The appearances on the exterior of the body were not precisely those remarked on the exterior of the other suicide, nor did the body exhale the odour of prussic acid. But the cavities presented many of the same characters as in the former case, and the hydrocyanic effluvium (not exactly that of laurel water) was perceptible in the stomach. In both, the blood was of a deep violet colour, fluid, and much accumulated in the head—in both, the stomach and small intestines were inflamed—though putrefaction had not advanced so far in the young man as in the elder.

We leave our toxicologists, and jurisprudents to draw their own conclusions how far these cases are capable of guiding them in similar medico-legal examinations. It is not improbable that they may often be called upon to examine the bodies of suicides destroyed in this manner.

5. *Simulated Diseases.*[*] Mr. Hutchison has related a great many curious instances of feigned diseases among our seamen, during the late protracted war, his situation, as Surgeon of the Royal Naval Hospital at Deal, having afforded him ample opportunities of witnessing, and often of detecting, such impostures. We shall glance at some of these.

1. *Ulcers.* These have been formed and kept up by first incising a piece of skin, and then applying a blister, quick lime, mineral acids, &c. In a limb which Mr. H. amputated, he found a piece of copper coin imbedded between the gastrocnemius and soleus muscles. The man confessed that he had thrust this substance into the ulcer, about nine months previously! The usual security against such tricks, is a well-applied bandage, from the toes to the knee, sealed with wax; but this was found inefficient, as pins were thrust through it, and the ulcer irritated. A wooden box was then placed round the limb, which proved effectual in preventing such practices.

2. *Diarrhœa.* Our author has known diarrhœa, and even dysentery, induced in hospital, for the purpose of invaliding—sometimes destroying the life of the infatuated self-tormentor. The means most resorted to by our seamen, were mixtures of vinegar and burnt cork, by which some of the finest young men in the service destroyed themselves.

3. *Fever.* This is a disease which Dr. H. has known to be feigned. He relates a case where a French prisoner swallowed tobacco, and cocovered his tongue with soap. The tobacco caused great rapidity of the pulse, but the matters ejected from the stomach smelled so strongly of tobacco, that the imposition was soon detected, and confession followed.

4. *Contractions of Hands, Elbows, Knees, &c.* These are very frequently feigned by sailors. They can only be detected by carefully attending to a variety of circumstances, and taking the impostors off their guard.

5. *Ophthalmia,* has been produced by putting irritating substances into the eyes, as alum, lime, tobacco, &c.

6. *Incontinence of Urine.* The best mode of detecting this imposture, in our author's experience, was the exhibition of laudanum, unknown to the person, and, when fast asleep, to place a clean napkin

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[*] Mr. Hutchison, Med. and Phys. Journal, February 1824.

under him. The napkin, of course, will remain dry during the sleep, if the disease be feigned, but be soiled, if real.

7. *Strictures.* This disease was often feigned by naval officers, when they wanted to leave their ships, from any cause of dislike to the captain or others. Mr. Hutchison generally detected it by placing the person against a wall, so as not to admit of retreat. A bougie was then passed into the urethra, when, in many cases, much difficulty was experienced in getting it beyond the perineum. If suspicion of imposture be entertained, the mind of the patient is to be drawn off, if possible, and an opportunity taken of passing the bougie into the bladder.

Are we not liable to some error here, when spasmodic stricture exists, which may allow the bougie to pass occasionally, though it may be a very troublesome complaint to the patient in general.

8. *Hernia.* Mr. Hutchison remarks that, although seamen are very liable to ruptures, from their great exertions, in furling sails, heaving up anchors, and working the great guns, yet the operation for strangulated hernia, is very seldom necessary. This we know to be the case; but then, we think the same remark extends to private life. There is not, we think, one case in 5000, which requires the operation, throughout England. Seamen, too, have *immediate* medical assistance, when an accident happens, which, of course, diminishes the chance of serious results.

Mr. H. concludes this paper with a curious instance of voluntary power over the cremaster muscles, possessed by a man who could draw the testes up into the groin, so as to produce the appearance of hernia there, and afterward let them drop down to the bottom of the scrotum, when the examination was over. Mr. Hutchison was, however, too lynx-eyed an observer to be deceived by this; for, although the tumours in the groins puzzled him at first sight, he soon proved an *alibi* of the testicles from their proper domicile in the scrotum, and caught them peeping through the Pope's eyes. The man, on being detected, acted like a philosopher, "and seeing no longer any chance of eluding the King's service, displayed before us several very remarkable feats of power he possessed over these organs."

Mr. H. promises a continuation of his paper, which is both amusing and instructive.

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6. *Medical Remuneration.* The general practitioners are greatly to blame not to unite for the purpose of devising some plan of changing the present disrespectable mode in which they are remunerated for their services. We are quite convinced that they are every day losing ground in public estimation; or, at least, that the public antipathy to their *practice* is daily on the increase. If they resolutely persist in their present course, they will, in a few years, throw almost the whole of their practice (in large towns especially) into the hands of physicians, prescribing surgeons, and dispensing chymists. This is as sure to ensue as the sun is to rise to-morrow morning. Physicians and sur-

geons are now becoming so numerous, that a considerable portion of the younger branches will attend at a much lower rate than the regular fee claimed by the seniors; thus accommodating the various classes of society. And even if this were not to be the case, the public are becoming so squeamish about swallowing large quantities of medicine that they will give the guinea for the prescription, rather than bring in the general practitioner and commence another long bill. This proves, that people will give much money for little medicine, rather than little money for much medicine. It ought to prove a lesson to the apothecary. Let him state fairly to his patients, that he will send as little medicine as possible, and charge half-a-crown or three shillings for his visit, appealing to their good sense and feeling which plan to accept. We know, from the practice of many large provincial towns, that this might be done. In several of these last, the items are never made out, unless the patient insists upon it, which is hardly ever the case. It is to be taken into consideration, that there are three things on the increase at present—wealth, luxury, and knowledge. All and every of these are in favour of large fees, and small doses of physic. But this by the way.

In the Court of King's Bench, a trial lately came on, for recovery of an apothecary's bill, in the case of Cole *versus* Devereux. The charges were proved to be reasonable by respectable witnesses; but still, the defendant's counsel showed that boxes of bills, some of which were charged 3*s.* 6*d.* had been sent, sometimes, twice in one day. This is an example of the misery of making the whole charge to fall on the medicine alone. Thus, if a whimsical patient, and there are many such, takes an antipathy to any form but pills, the general practitioner is forced to send either an enormous number of these, or charge an exorbitant price for each box. Mr. Cole recovered about two-thirds of his bill.

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7. *Case of Recovery from supposed punctured Wound of the Diaphragm.*[*] Thomas Rowbotham, ætat. thirty-five, received two wounds in the abdomen, from a shoemaker's knife, on Friday, 28th of June, 1816. The blade of the instrument, about three inches long, and sharp-pointed, was plunged up to the handle into the body. The wounds, one on the right, the other on the left side of the epigastrium, bled profusely—the more so, as he was obliged to walk nearly a quarter of a mile directly afterward. On the day following, the right wound still bled freely, and at intervals on Sunday and Monday, with the emission of air bubbles, resembling those produced by vinous fermentation. As the hæmorrhage subsided, considerable extravasation of blood, with emphysema, appeared gradually extending over the abdomen, which, on Tuesday, was much swollen, with a degree of tension. From the left wound, there was some bleeding; at times he laboured under a spasmodic difficulty of breathing, the skin yellow, and slight pyrexia, at evening—depletion was fully employed, with good effect. On the

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[*] Mr. Wood, Med. Repos. No. 7, New Series.

following Sunday, suppuration was established, and he was able to sit up—in a fortnight, the wounds were healed, and no complaint but debility remained.

Commentary. We do not think that the chest was penetrated by either of the above wounds. An instrument three inches in length, plunged into the *left* epigastrium, would have to traverse the left lobe of the liver (position perpendicular) before it entered the chest—and if it did not enter the chest, it would, most probably, be where the pericardium is attached to the diaphragm. In this case, we conceive, the symptoms would have been different.

In respect to the wound in the *right* side of the epigastrium, an instrument three inches in length, plunged in, and slanting upward (position as before) would inevitably come in contact with the liver—and we think such an instrument could not penetrate the chest in that side. It appears from the icteritious symptoms, that the liver was actually wounded, in this case. As for the bubbles of air, and emphysema of the abdomen, such phenomena would be more likely to take place, under the above circumstances, from puncture of the colon, or other intestine, than wound of the lungs.

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8. *Defamation of Character.* A medical practitioner, of the name of Pierpoint, residing in Worcester, lately brought an action against a lady there, for aspersing his character. He had administered an emetic to a Mrs. Isaac, who died some time afterward, and the practice was loudly condemned by the sister of the patient, who used very improper language on the occasion. A verdict was given in favour of Mr. Pierpoint, and thirty-nine shillings damages. We mention this trial, because we are not quite satisfied with the evidence of one of the medical witnesses, Dr. Lewis, who appears never to have seen the patient, dead or alive, condemned the exhibition of the emetic, as injudicious. The evidence of Dr. Johnson, of Birmingham, was a model of medical ethics, upon this occasion, and, therefore, we shall quote it. "The expediency," says this veteran physician, "of administering an emetic, must depend on the *symptoms of the moment.* If called in, when Dr. Malden was, I could not tell what the symptoms had been on the 10th of April, *nor judge of the expediency of administering an emetic.* If the patient felt relieved (which it was proved she did) I could not ascribe the symptoms of inflammation afterward appearing to the emetic." This was the just, the honourable, the ethical, and, we may add, the truly Christian evidence to give. We forbear to set a name on any other kind of evidence in similar cases.

We know nothing of Mr. or Dr. Pierpoint. The *man* has nothing to do with the *ethics* of the question. All personal considerations should be excluded from the mind of a witness, on such occasions—and, certainly, we shall not fail to stigmatize any deviation from the rule of right, on the part of our professional brethren, when called in to pass judgment on the conduct of their brother practitioners.

XIII.

BIBLIOGRAPHICAL RECORD;

OR,

Works received for Review since last Quarter.

1. A comparative View of Fever and Inflammatory Complaints, with Essays, illustrative of the Seat, Nature, and Origin of Fever. By THOMAS MILLS, M.D. Licentiate of the King and Queen's College of Physicians. Octavo, pp. 125. Dublin and London, April, 1824.

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2. Revue Medicale Française et Etrangère; et Journal de Clinique de l'Hotel Dieu et de la Charité de Paris. Avril, 1824. (In exchange.)

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3. An Introduction to Anatomy and Physiology. For the Use of Medical Students and Men of Letters. By THOMAS SANDWITH, Surgeon. Octavo, pp. 192. London, 1824.

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4. Observations on Fever. By R. WADE, Member of the Royal College of Surgeons, and Apothecary to the Westminster General Dispensary. 8vo. pp. 83. London, June, 1824.

⁂ *This is addressed to "the notice of students," but will not be found undeserving the attention of some who have long quitted that rank.*

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5. Strictures on "Mr. Pattison's Reply to certain Oral and Written Criticisms." By W. GIBSON, M.D. Philadelphia, 1820. Octavo, sewed, pp. 48.

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6. The Institutes and Practice of Surgery:—being the Outlines of a Course of Lectures. By WILLIAM GIBSON, M.D. Professor of Surgery in the University of Pennsylvania; Surgeon and Clinical Lecturer to the Alms-House Infirmary, &c. Vol. I. 8vo. pp. 470. Plates. Philadelphia, 1824.

⁂ *We hope to be able to notice this first volume from the able pen of Dr. Gibson very shortly.*

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7. Physiological Views of the Structure, Functions, and Disorders of the Stomach and Alimentary Organs of the Human Body, with Observations on the Qualities and Effects of Food and Fermented Liquors, and on the Influence of Climate and Local Situation. By THOMAS HARE, F.L.S. F.H.S. Fellow of the Royal College of Surgeons in London, &c. 8vo. pp. 368, 2 plates. Second Edition. London, June, 1824.

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8. An Elementary System of Physiology. By JOHN BOSTOCK, M.D. F.R.S. L.S. and H.S. &c. Vol. I. pp. 518. London, May, 1824.

*** *We are glad to see an original elementary work on Physiology from the pen of an Englishman. Dr. Bostock appears capable of doing justice to the subject. We should suppose there will be two—at all events, one volume more. We shall shortly enter on a review of the publication, which we have no hesitation, in the mean time, to recommend strongly.*

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9. Evils of Quarantine Laws, and Non-existence of Contagion; deduced from the Phenomena of the Plague of the Levant, the Yellow Fever of Spain, and the Cholera Morbus of Asia. By Charles Maclean, M.D. 8vo. pp. 444. London, June, 1824. [*In our next.*]

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10. A Voyage to India: containing Reflections on a Voyage to Madras and Bengal, in 1821, in the Ship Lonach; Instructions for the Preservation of Health in Indian Climates; and Hints to Surgeons and Owners of Private Trading Ships. By James Wallace, Surgeon of the Lonach. 8vo. pp. 166. London, June, 1824.

*** *The instructions and hints contain good and wholesome advice; and we can conscientiously recommend this little volume to those to whom it is more particularly addressed. Of the non-medical or descriptive portion of the volume, we could also speak favourably, were we permitted—but, alas! from such flowery paths of literature we are now severed—perhaps for ever!—We honour the head and heart of the author.* Vive valeque.

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11. Official Report on the Fever which appeared on board His Majesty's Ship Bann, on the Coast of Africa; and among the Detachment of Royal Marines, forming the Garrison of the Island of Ascension, in the year 1823. By William Burnett, M.D. one of the Commissioners of the Medical Department of His Majesty's Navy, Physician in Ordinary to His Royal Highness the Duke of Clarence, and Honorary Fellow of the Imperial Medico-Chirurgical Academy of St. Petersburgh. 8vo. pp. 78. London, June, 1824.

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12. Elements of Physiology. By A. Richerand, Professor of the Faculty of Medicine of Paris, Member of the Academies of Vienna, Petersburgh, Madrid, Turin, &c. Translated from the French by E. M. De Lys, M.D. Fourth Edition, with Notes and a copious Appendix. By James Copland, M.D. Lecturer on Physiology, Pathology, and Therapeutics; Consulting Physician to Queen Charlotte's Lying-in Hospital; Physician to the Royal Universal Infirmary for Children; and Member of the Royal College of Physicians, London, &c. &c. 8vo. pp. 704. London, July, 1824.

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13. A View of the Formation, Discipline, and Economy of Armies; with an Appendix, containing Hints for Medical Arrangement in actual War. By Robert Jackson, M.D. A New Edition much enlarged. Quarto, pp. 545. Stockton and London, July, 1824.

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14. Elements of Phrenology. By George Combe, President of the Phrenological Society. With two Engravings. Duodecimo, pp. 227. Edinburgh and London, July, 1824.

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15. A Summary of Physiology. By F. Magendie, M.D. Translated from the French by John Revere, M.D. &c. Second Edition. 8vo. pp. 444. Baltimore, 1824.

16. Surgical Essays. By Baron D. J. LARREY, &c. Translated from the French, by JOHN REVERE, M.D. &c. 8vo. pp. 335. Baltimore, 1823.

*** *Both the above works are very respectably translated from the original language, and we wish them success in transatlantic regions.*

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17. The New-York Medical and Physical Journal. Numbers 6, 7, 8, and 9. (In Exchange.)

*** *This new Journal, dedicated almost exclusively to American original communications, continues to increase in value as it proceeds.*

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18. Observations on the Nature and Treatment of Fevers and Bowel Complaints which Travellers in Greece are exposed to: including Remarks on Climate, Malaria, the Safest Period of the Year for Travelling, and Hints for the Preservation of Health. Intended as a Medical Guide to Travellers. By JOHN SOMMERS DOWN, M.D. &c. &c. Resident Physician at Florence. Small 8vo. pp. 76. Rowland Hunter, St. Paul's Church-Yard.

*** *This little work is written in the form of familiar letters, and is well deserving the attention of every traveller through Italy and Greece.*

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19. Istoria D'Una Specie Straadinaria de Cecita Conjuncta. Signior ANTONIO SCARPA. 1824.

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20. Sull' Ottalmia che Hanno Sofferto i Militari di Livorno Osservationi. Di LODOVICO PAOLI. 8vo. 1824.

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21. Memoria Sopra un Nuovo Strumento per Operare le Catarette e per Formare la Pupilla Artificiale. M. GEORGI. 8vo. sewed, 1822.

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22. Storia della Malattia per la quale Mori il Conte G. Perticari. GIACOMO TOMMASINI. Duodecimo, sewed, 1823.

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23. Appendix to the Formulary for the Preparation and Mode of Employing several New Remedies, &c. &c. By ROBLEY DUNGLISON, M.D. F.R.S. Nancy, &c. Translated from the French. 8vo. sewed, pp. 48. August, 1824.

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24. Illustrations of the Arteries connected with Aneurism, and Surgical Operations. The Plates are intended to explain the relative Position of the Arteries, in respect to the Surrounding Parts, and the Organs to be met with in such Operations, both externally and internally to their Sheaths. This Plate is the first of a complete Series. By G. D. DERMOTT, M.R. C.S. Price Five Shillings; or Mounted in Boards Six Shillings. Burgess and Hill, July, 1824.

*** *We wish Mr. Dermott, who is a zealous and indefatigable private teacher, every success in his undertaking.*

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25. Anatomical Drawings, from Preparations in the Museum of the Army Medical Department at Chatham. Royal Folio, Nine plates, and numerous Figures, with explanatory Letter Press. August, 1824.

*** *We understand the Army Medical Museum at Chatham, is already rich in Pathological Specimens, and is rapidly increasing. We shall give some account of the specimens in this fasciculus in our next Number.*

26. The Westminster Review, No. 3, for July, 1824.

*** *There is in this Number, an excellent article on the difficulty of procuring dead bodies for dissection. It will do much good through a popular medium like the Westminster Review.*

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27. Original Cases, with Dissections and Observations Illustrating the Use of the Stethoscope and Percussion in the Diagnosis of Diseases of the Chest; also, Commentaries on the same Subjects; selected and translated from Avenbrugger, Corvisart, Laennec, and others. Pp. xxxii. 336. Three Plates. By John Forbes, M.D. Physician to the Chichester Dispensary. London, 1824.

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28. Beobachtung einer Chroniscen Entzundung des Ruckenmacks mit ungewöhnlichem Ausgange nebst Bemurkengen daruber von Ludwig Wolff, Jun. M. et Ch. Dr. ausubendem Arzte zu Hamburg. Hamburg, 1824, pp. 151.

*** *In this volume, a brief but yet interesting and practical view is taken of Inflammation of the Spinal Marrow. Some ingenious observations are also made upon Fungus Hematodes. We shall take a further opportunity of noticing the opinions of the ingenious author more at length.*

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29. A System of Anatomical Plates; accompanied with Descriptions and Physiological, Pathological, and Surgical Observations. By John Lizars, F.R.S. E. Fellow of the Royal College of Surgeons, and Lecturer on Anatomy and Physiology. Edinburgh. Part V. Muscles and Joints of the Upper and Lower Extremities.

*** " *This Part is accompanied with two supplemental Plates to Part* IV. *illustrative of Hernia, from dissections by the hand of Sir Astley Cooper, Bart. Surgeon to the King, &c. Kindly presented to the author, and preserved in his Museum at Edinburgh." This Part contains nine Plates, and 136 pages of Letter Press, price* 10*s.* 6*d.* Vires acquiret eundo.

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30. Medical and Surgical Cases, selected during a Practice of Thirty-eight Years. By Edward Sutleffe, Queen-Street, London. 8vo. pp. 628. August, 1824.

" In every work regard the writer's end."

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31. Elements of the Etiology and Philosophy of Epidemics. In two Parts. By Joseph Mather Smith, M.D. Fellow of the College of Physicians and Surgeons of the University of the State of New-York, &c. 8vo. pp. 223. New-York, 1824. *Received 18th August*, 1824.

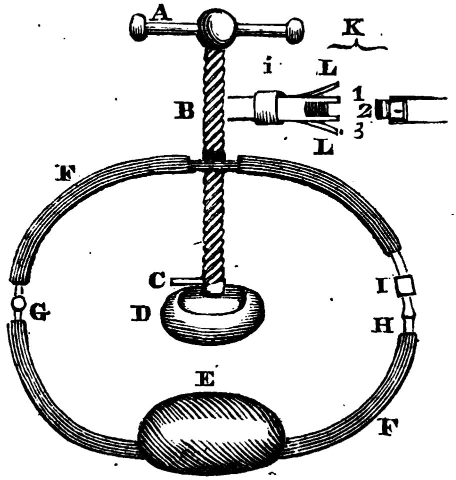
*** *We return many thanks to Dr. J. Watts, Jun. for this acceptable present, and the accompanying letter.*

XIV.

EXTRA-LIMITES.

I.

A Description of an Instrument for Applying Local Pressure, without Interfering with the General Circulation. Its Use in a Case of Ovarian Dropsy. By H. SEARLE, Surgeon, London.



THE above instrument is recommended for the purpose of applying pressure to any part of the human frame, without including within its influence, parts which are not required to be pressed, (excepting the portion which must necessarily sustain the counter-pressure.) The construction of it is more economical than any other that has hitherto been used, which may be seen by referring to the Figure. A. the sliding handle; B. the screw; C. a pin, by which the compressing pad D. is unscrewed, in order to substitute another of a different size or shape; E. the pad for counter-pressure; FF. the elastic steel ring, covered with leather; G. its joint, which allows it to be applied with great expedition; H. the lock shut; I. its slide; K. the lock opened, which is formed of two slips LL. split from their centre-piece, and have a pin at each extremity, 1. 2. 3. Its three portions having a bore in each, which together, equal the length of the two pins, and when received in fastening, of course, meet in the bore of the middle portion, 2.

In order to open this lock, draw back the slide I, and the two slips being made to diverge will draw the two pins out of the middle portion, and thus liberate it. To shut it, bring the ends of the ring together, and draw the slide home to the lock. This lock was contrived by Mr. Botschan, Instrument Maker.

Sir Astley Cooper constructed an instrument on a similar principle, about twenty years ago, to compress a popliteal aneurism; the counter-pressure was thrown upon the knee and trochanter major, and the screw was held by a semicircular piece of iron. I have not seen the description of it. It is to be found in the 8th vol. of the Med. Phys. Journal. The patient could endure the application of it only for a few hours; it being a dead pressure, and at once applied with severity. Its further use was abandoned.

The advantages of the present apparatus are, that it may be applied mildly or forcibly to any external part of the body; to a large or a small surface, by having suitable pads made, which can be easily exchanged upon the instrument, and that it will not impede the general circulation, unless intended to do so by compressing the arterial trunk.

Pressure upon a small surface should be used gently at first, and gradually increased according to the feelings of the patient, for nothing is more true, than that the human frame cannot endure, for any length of time, severe dead pressure, if suddenly produced, and it is well known that the animal economy will enable the body to accommodate itself to a great degree of violence, provided it be brought on by an insensible increase. For instance, an eye may be pushed out of its socket by the growth of a tumour behind it; bones can be dislocated, curved or perforated, by a progressive force from within; some organs can sustain an hundred-fold enlargement of their capacity without producing the least pain, and that these diseases would soon extinguish life by the irritation they would occasion, were the pressure sufficient to effect these extraordinary changes in a less gradual manner.

In applying pressure from without, we should imitate Nature in producing it from within, for while it becomes progressively augmented in any one direction, there are both a yielding and a resistance in the opposite, so that a slight undulation attends the whole process, as if through the agency of a spring. It is therefore recommended, that the ring of this instrument be made of steel sufficiently thin and tempered, to allow of a continual play by virtue of its elasticity, and the relief this will afford to the sufferings of the patient, was proved in the following case of ovarian dropsy.

A young lady had been troubled with this complaint several years, and various modes of treatment had been tried by the different medical gentleman she had consulted. She then became my patient, and after prescribing some medicine, which had no better effect, I recommended her to try pressure, which was accomplished by placing two books upon the abdomen strapped down by two leathern belts well wadded. This somewhat lessened the ovarial tumour, but the legs became swelled, and their skin much inflamed. This plan was persevered in during a few months with great distress, and she was prevented taking proper exercise. Finding the immediate effect of this plan advantageous to the complaint, which had now existed upward of six years, I advised her to be tapped, that it might be attempted under more favourable circumstances. Sir A. Cooper performed the operation, the patient being in a recumbent position, which is unquestionably preferable to that of sitting, and he took great pains in expressing all the water, which was about 16 pints, and contained in one cyst. I then returned to the use of pressure, and several towels were placed upon the abdomen, and bound on with about forty yards of calico and flannel, four inches wide, upon these a book or two were strapped with the two leathern belts as before. But this pressure was so steady and general upon the abdominal viscera, that digestion became completely stopped, and the hips excoriated from the bandages. These sufferings were endured with fortitude for a week, when the whole was undone, and there appeared to be a re-accumulation of about three pints; as this quantity of fluid was much less than is usual a week after tapping, she was bound up again, not quite so high nor so tightly, and small bolsters were placed so as to protect the hips. Her diet was as much animal food, with brandy and water, as she could conveniently take to lessen the disposition to serous effusion. This mode was persevered in for several weeks longer, when the effects upon the hips and ribs, rendered some other method of applying the pressure indispensable. Her health in the mean time had considerably improved, for symptoms of a typhoid character, during the first few days, had been produced.

A steel plate, six inches by six, was then fitted to the back, and well padded; another, a front plate, was made seven inches in length, and oval, that it might fall within the ilia and pubes. At each side of the back plate, a semicircular spring was attached, which came forward, and was connected with a screw made to act upon the centre of the front plate; the circle of apparatus being complete; it answered extremely well for a day or two, after which, the back became excessively painful, and required further protection. Therefore, two pads, seven inches by three each, and one in thickness, stuffed with horse-hair, were stitched together like the lids of a book, so as to form a joint which enabled them, when inclined a little toward each other, at an obtuse angle round the back, to throw the counter pressure upon the soft parts on each side of the spine, while the lower parts rested upon the sacrum. This has been worn ever since, without any inconvenience, which is principally owing to the springs. It can be easily put on; it should then be screwed down till the pulsation of the aorta be apparent, and one turn of the screw backward, adjusts it to the degree of pressure, which has been borne twelve months without any symptom of a return of the complaint. The abdominal parietes not yet having contracted to their natural state, she cannot leave off the instrument. No attempt has been made to prove whether the disease would return, without its use. The patient does not present any outward appearance of her wearing it. It may be observed, that the viscera are so exceedingly mobile, that no adhesions can have taken place.

Sir A. Cooper has lately recommended a leathern belt, for stopping the further progress of the complaint previous to tapping; whether he has ever tried it, I cannot say, but, in this instance, the little good afforded, was far exceeded by the inconvenience of swelled legs.

There are many cases in which this description of instrument might be found useful. It can be easily modified in its construction, and be adapted to any part of the body. It is certainly deserving another trial in aneurism. The obliteration of an artery, probably would not be a very tedious process, could the apparatus, by means of its spring, and judicious management, be borne, as the anastomosing vessels soon enlarge, and divert the circulation of the blood from the portion rendered impervious, and which, being in a diseased state, would the more readily have its coats become inflamed. It might require two degrees of pressure; one immediately above the aneurismal sac, to keep the blood out of it, and the other upon it, milder, to excite inflammation. Experiment would soon prove whether this regulation would be necessary. Pressure might also be applied to the chest or back, without impeding respiration; to the carotid artery, when required to be taken up; or to any part which was circumscribed.

II.

DR. GORDON SMITH'S QUERIES.

We are requested, on the part of Dr. Gordon Smith, to state, that he is under the necessity of postponing his intention of lecturing on Political Medicine, this season. His friends are aware how frequently he has, of late, been laid aside; and his health is yet in too precarious a state to warrant the contraction of so important an engagement with the Public. He trusts that the delay which may intervene, before he can execute an object he has so much at heart, will prove advantageous to the ultimate accomplishment of his wishes.

In the mean time, he has resolved to occupy himself, more fully than has yet been done by any individual, with the important and ill-understood subject, of proving or disproving the vitality of new-born children—or, to speak technically, of Infanticide. There is no point in forensic medicine, on which so much perplexity exists, and for the elucidation of which so little has, in reality, been done. Dr. Smith is persuaded, that this is owing, in great measure, to want of due pains fairly bestowed—for, whether the existing state of knowledge be estimated positively, or negatively, no one who has at all looked at the question, can be unaware that there is much work to be gone through, before satisfactory conclusions can be formed.

It is almost impossible for any individual—at least, Dr. S. feels that it is beyond the compass of his own unaided power, to do justice to the problem; as few who possess the means, can be supposed to have the leisure requisite to collect, arrange, and apply, the necessary data. But he relies on the zeal and liberality of the profession, to assist him in so important an undertaking. He, therefore, embraces this opportunity of soliciting, from those who may have opportunities of handling the bodies of new-born infants, a few items of information, which he hopes will not occasion much trouble, and the aggregate of which, he trusts, he may be enabled to apply with precision and advantage—so that the truth may be established (either one way or other, and to its proper amount) with regard to certain doctrines that have been bandied about for many years, without any satisfactory estimate as to their fair practical import.

Simple answers to the following queries, form the object of the present application

—premising that the subjects chosen must be *perfect;* that is, of ordinary developement, freef rom redundant parts, mutilation, disease, putrefaction, &c. and such as are unquestionably of the class to which they may be assigned; if, in any particular instance, there should be points in morbid anatomy, which, in certain cases, might greatly assist in coming to appropriate conclusions, they will require to be carefully stated.

The subjects, being classed, *first,* as STILL-BORN—or such *as have never respired;* and, *secondly,* as VIVI-BORN, or those that *have been born alive,* and have respired, but died within twelve hours. Dr. Smith begs to submit the queries in the following manner.

Class I. STILL-BORN *Subjects*—Required the

1. Sex?—2. Period of gestation when born?—3. How long *known* or *supposed,* (as the case may be) to have been dead *in utero?*—4. The cause of death?—5. Nature of the labour?—6. Exterior aspect of the body?—as to α Colour; β Integrity; γ Developement; δ Formation; ε Marks of violence, ecchymosis, &c. or any *peculiarity* —7. Length from the crown of the head to the under surface of the heel?—8. Point at which the middle length of the body falls to be given, as regards its distance, from the umbilicus?—9. Weight of the whole body, prior to any interference with its integrity; to be accurately given in ounces and fractions, stating the species of weight used?—10. Aspect of the lungs, *in situ,* on laying open the thorax; and form of the diaphragm?—11. Weight of the lungs, separated from all attachments—avoiding the spilling of contents?—12. Weight of any fluid that may escape from the trachea, on holding the lungs in an inverted position (without squeezing them) and the fluid to be described?—13. Result of placing the lungs in a washing basin of water, first entire, then separately;—*i. e.* the right and left lung each by itself—noting if there be any difference of buoyancy in either, and which—as, also, any morbid appearances that may present themselves in these organs?—14. Weight of the liver, &c. managed in a similar way?—15. State of the alimentary canal, with regard to contents?—16. State of the uninary bladder?—17. State of the gall bladder?—18. State of the ductus, ateriosus, and venosus?—19. Colour and consistence of the blood, expressing the part or parts of the body in which the observation may have been made.

Class II. VIVI-BORN SUBJECTS. Required the

1. Sex? 2. Period of gestation when born?—3. The first actions. α As to crying, or manner in which respiration was manifested?—β State of the umbilical cord?—γ As to evacuations per anum and urethram?—4. Cause, manner, and time of death? Then to follow the queries, as in the other case.

It is not expected or desired that any individual shall take the trouble to furnish *a list.* A single case properly investigated, and clearly stated by an intelligent hand, will be worth hundreds such as seem to have been collected abroad, one hardly knows how. In order, however, to impart necessary satisfaction as to the authenticity of the materials, it will be essential, that those who may be pleased to transmit the results of their inquiries, should verify them with their signatures; and, in all cases, when practicable, Dr. Smith will scrupulously acknowledge his obligations.

Communications may be forwarded for Dr. Gordon Smith, to the care of Messrs. Underwood, 32, Fleet Street, London; and he leaves the *economy* of transmission entirely to the convenience and discretion of correspondents.

MR. BATTLEY ON THE COMPONENTS OF OPIUM.

To the Editors of the Medico-Chirurgical Review.

GENTLEMEN,

In your last number, I stated that I had subjected twenty-six pounds of opium to the action of water, and that a residuum or refuse of three pounds was left in deposite. I showed, also, that the morphium of opium (so called) was contained or included in this residuum.

Finding much inconvenience from the attempt to continue my experiments upon the large scale of twenty-six pounds, I have proceeded upon eight pounds only, and to that scale or standard, the following statements must be referred. I do not, however, find the same *proportional* results, and I apprehend that equality, in this respect, is not to be expected from any two quantities of opium, although of equal weight.

Eight pounds (avoirdupois) of opium, when *perfectly* dried, weighed about seven pounds, and imparted to distilled water 4 lbs. 12 oz. leaving a residuum of 2 lbs. 4oz. when dried; the latter containing, as I continue to assert, the *morphium.* This residuum, subjected to the process described in my last paper, produced of pure crystals, 8 drachms 44 grains.

The 4 lbs. 12 oz. imparted to the distilled water, when dried, was subjected successively, four times, to the action of cold water, and precipitated 12 oz. 60 grains. This precipitate dried, and then macerated in dilute acetic acid and ammonia in excess, yielded,

	drachms.	grains.
Morphium	2	4
Pure resinous matter	3	40
Remained in the filter	0	14
	5	58

Leaving 9 oz. 26 grains not acted upon, and the remainder suspended in the maceration.

Little, if any, effect, followed from the immersion of the 9 oz. 26 grains in four pounds of alcohol (*cold*) during fourteen hours:—when heated to boiling temperature, the alcohol became deeply tinged, and the boiling was repeated in fresh alcohol, eight to ten times, until the alcohol ceased to be affected. The following are the results of this operation, viz.

	oz.	drachms.	grains
Pure resin	4	2	
Not acted upon	4	6	40

One moiety of the latter, immersed in a mixture of,

Distilled water	2 pints.
Ammonia	1 oz.

left in deposite matter of a gray slaty appearance, weighing, when dried, 1 oz. 2 drachms, 20 grains, and imparted to the fluid, the same weight of 1 oz. 2 drachms, 20 grains, resembling, in appearance, hard extract of liquorice.

The other moiety was immersed in diluted nitric acid, and remained in a temperature of 100°, during several days, when a mass was formed.

which imparted to distilled water, 2 drachms, 10 grains, of a bright deep yellow colour, (when condensed) in quality adhesive, and to the taste bitter,—acrid. Of the remainder, 1 drachm, 40 grains, boiled in alcohol, yielded to that menstruum, 22 grains of a dingy yellow appearance, and of the taste of raw coffee.

The 4 lbs. 12 oz. (reduced by the precipitation before mentioned, of 12 oz. 60 grains) in the state of extract, had entirely lost its characteristic properties of taste and smell, and had become simply bitter to the taste, but intense in degree, and of an agreeable odour, and upon being alternately extended and relaxed by the hand, altered from a dark dull appearance to a bright yellow colour.

Of this mass:—

Four ounces were diffused in ten pints of distilled water; the mixture, turbid, upon filtering became transparent, and the test paper showed the presence of an *acid*. To this clear or transparent solution, was added, one pint of acetic acid, and after twenty-four hours, ammonia was added in excess; a precipitation ensued, which, when washed and dried, weighed twenty-one grains, of a dark, shining, brittle quality, and pulverized readily. Boiling alcohol dissolved 19 grains, leaving a refuse of two grains. Upon recovering the extract, (19 grains) from the alcohol, not a crystal was formed, *thus showing the entire absence of morphium*, from the mass from which the four ounces were taken.

Four ounces diffused in the same quantity of distilled water, produced a mixture slightly turbid, which became perfectly clear upon passing the filtre, showed an acid as before, and upon adding liq. potass. so long as the presence of acid was indicated by the test paper, the solution became exceedingly turbid, and deposited a substance, which, when washed and dried, weighed three drachms; this substance yielded to boiling alcohol (frequently repeated) crystals, 2 drachms, 33 grains, and left on the filtre 21 grains saline particles.

Four ounces diffused in the same quantity of distilled water, presented similar effects, until, by the addition of ammonia, instead of liq. potass. a considerable deposition, of a yellow colour and globular formation was produced, weighing, when dried, about one ounce.—Severe illness prevented the further prosecution of this branch of the investigation.

To four ounces diffused in like manner, magnesia was added; the deposition weighed 1 ounce, 2 quarters, 1 drachm, and yielded to boiling alcohol, still more frequently repeated than before, crystals 3 drachms, 21 grains.

I have now brought this inquiry to a point which will enable me, in a future paper, to state what separations from opium are effected upon obtaining the liq. op. sedativ. and *what those separations severally are*, and I shall also endeavour, in the same paper to show the constituents of that preparation.

I am, GENTLEMEN,
Your obedient Servant,
RICHARD BATTLEY.

FORE STREET, 14th August, 1824.

XV.

INTELLIGENCE, &c.

☞ *The following was transmitted to us by the Two-penny Post.*

SOCIETY OF PHYSICIANS of the UNITED KINGDOM.

ESTABLISHED IN LONDON, JUNE 17, 1824.

ALTHOUGH Medicine has been studied from a very early period, and considerable genius and learning have been employed in its cultivation, yet such is the extreme complication and difficulty of the subject, that its present state still admits of great improvement; to which, perhaps, nothing would more effectually contribute, than the intimate union and active co-operation of its professors.

Much may certainly be accomplished by united effort, which individual exertion, however well directed, is unable to effect. While, at the same time, it cannot be doubted, that whatever contributes to the advancement of medical Science, must, by increasing its usefulness, add to the dignity of the profession.

Under these impressions, and considering that a great majority of the regular Graduates in Physic, of this Country, are at present in an isolated state; several Physicians practising in London, have been induced to associate; and to invite the zealous co-operation throughout the Kingdom, of that part of the Profession to which they belong; with a confident hope of facilitating, by these means, the accomplishment of the laudable purposes just mentioned.

It is, therefore, proposed that a Society be established, having principally in view the following objects:—

I. The reception and discussion of subjects, connected, in any manner, with the science of Medicine.

II. The combined investigation of such points, whether theoretical or practical, as are at present obscure or uncertain, and to the elucidation of which, individual labour has hitherto appeared inadequate.

III. The publication of papers furnished by Members of the Society; or of those which may be transmitted to them, by the Profession at large.

IV. And, in general, the effecting of whatever may tend to improve the science of Medicine, or to advance the interests and dignity of its Professors, the regularly educated Graduates in Physic of the Universities of the United Kingdom.

At a Meeting held JUNE 17th, 1824, at the House of Dr. SHEARMAN,
Present;—DRS. TEMPLE, CLEVERLY, BIRKBECK, UWINS, CLUTTERBUCK, HANCOCK, SHEARMAN, COPLAND, TWEEDIE, and ROBERTS.

It was resolved unanimously—

I. That a Society of Physicians be established, for the purposes above stated.

II. That it be called "*The Society of Physicians of the United Kingdom.*"

III. That the Society consist of such persons only, as have actually prosecuted the study of Medicine in a University, for the period prescribed by its regulations, and who, having subsequently submitted to the usual tests and examinations, have thereby obtained the degree of Bachelor or Doctor of Physic. *But Members of the London College, whether Fellows or Licentiates, admitted prior to the year* 1800, *are eligible.*

IV. *That no person be a member of this Society, who is engaged in the actual practice of Surgery, Pharmacy, or Midwifery.*

V. That a Committee be appointed for the purpose of giving the necessary publicity to these transactions; of receiving communications from the Profession; of preparing a system of laws and regulations, for the government of the Society; and of performing, in general, whatever may be conducive to its interests, prior to the first General Meeting; to which they are to report proceedings, and resign their functions.

VI. That the following Gentlemen be Members of this Committee, with the power of making such additions to their number, as they may judge convenient:—

Committee:—Drs. TEMPLE, CLEVERLY, BIRKBECK, UWINS, CLUTTERBUCK.

VII. That the first General Meeting take place at the House of Dr. BIRKBECK, at half-past Eight in the Evening, on the second Thursday in October next.

(SIGNED) C. J. ROBERTS, *Sec. pro temp.*

Communications on the subject of the Society, to be addressed to Dr. ROBERTS, No 20, Earl Street, Blackfriars.

REMARKS.

We have but a very few observations to make on the laws of this Society, which, from its organization, must quickly fall into decay, or even annihilation. *If the objects of the Society were what they seem to be*—the improvement of Medical Science—the MEANS would not be restricted to such narrow channels as in the above code. Are Surgery, Pharmacy, and Midwifery no parts of Medical Science?* Can this extensive and most difficult of all branches of human knowledge be cultivated and improved only by men who have graduated at particular Universities? Is the man who has spent twenty, thirty, or forty years, in the ardent pursuit of medical knowledge, in various countries, *necessarily* incapable of promoting Medical Science, if he have not spent two years in Glasgow, or three in Edinburgh?—Is it in the 19th Century that such illiberal principles are to be publicly avowed by a Society, the private and well-known object of which is, to oppose similar, but far more liberal restrictions, enjoined by the Royal College of Physicians? Is it in the 19th Century that such a principle is maintained, as that, *the man who is admitted a Licentiate of the Royal College of Physicians, on an examination only*, in 1799, is capable of advancing the interests of the Medical Profession, while *all others*, admitted in a similar manner, after that period, are totally incapable, and consequently unfit to be members of this medical Junto? Such is one of the fundamental laws of the Society—a law obviously made, not from any zeal for science, but to include one or two personal friends of the Junto, and to exclude all others. Finally, we do suspect that the *ostensible* are not the real objects of this society—that it is erected on the basis of injustice and illiberality—and that it will end in discomfiture and contempt.

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* Has the principal Member of this Junto forgot that he himself practised very many years as an Apothecary, and, in *such capacity*, considered himself qualified to be a Censor of Medical Science, having published no less than 15 Volumes of a MEDICAL REVIEW? Is the ladder by which he ascended to be kicked away the moment he arrives at the summit?

II.

Artificial Selter Water. This celebrated Mineral Water is now imitated, with great accuracy, at Brighton, and sent to all parts of the kingdom. An Establishment, under the direction of Dr. Struve, of Dresden, has been formed on the Marine Parade, and from personal experience, we can vouch for the luxury, as well as salubrity of this excellent beverage: It is more grateful than Soda Water, while it improves the state of the digestive organs, and, through them, gives tone to the whole system.

III.

Literary Intelligence. The Papers printed in the Transactions of the Royal Society, during the last three years, detailing the Discoveries of the Functions of the Nerves, will be immediately re-published with Notes, and a general introductory View of the Nervous System; by Mr. Charles Bell, Professor of Anatomy and Surgery to the Royal College of Surgeons, and Surgeon to the Middlesex Hospital.

IV.

Protection of Vaccination. Dr. Gregory, the able Physician to the Smallpox Hospital, has just published his Report to the Governors of that Institution. We can only notice those particulars that relate to Vaccination. In 1823, of 151 patients, treated in the Institution for Smallpox, 47 had previously undergone vaccination. *The whole of these recovered.* On a medium calculation, twelve of these would have died had it not been for the protecting influence of vaccination—though there is reason to believe, that it was but imperfectly performed in these 47 cases. Of the 72 admitted in the first five months of 1824, nineteen had been vaccinated. Of these, one died. In this unfortunate case, Dr. Gregory ascertained that the vaccine process had been very imperfect. In 1823, there were vaccinated, under Dr. Gregory's superintendence, 3129 persons, and in the first five months of 1824, one thousand two hundred and eighty passed through this process. Dr. G. avers that, at no previous period, has the confidence of the lower orders in the security of vaccination appeared greater than at present. The metropolitan population, Dr. G. observes, have better opportunities of appreciating the protecting influence of vaccination than those of the country towns, as smallpox is always present in London—"seeking whom it may devour." Dr. G. concludes with a high, and well-merited eulogium on the Jennerian discovery.

TO THE FACULTY.

A Surgeon who has been established in a large and populous Town and Neighbourhood, for upwards of Four and Twenty Years, as a general Practitioner, is anxious to dispose of it immediately.

The Terms will be found highly advantageous to the Purchaser. Reference is requested to be made to Dr. James Johnson, of *Suffolk place, Pall Mall East, London*, who will give every information on the subject, that may be required.

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